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1988
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Water Resources Data California

Water Year 1988

Volume [illegible] Pacific Slope Basins from Arroyo Grande
to Oregon State Line except
Central Valley

U.S. [illegible]
Prepared [illegible]
Water Resources [illegible]

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CALENDAR FOR WATER YEAR 1988

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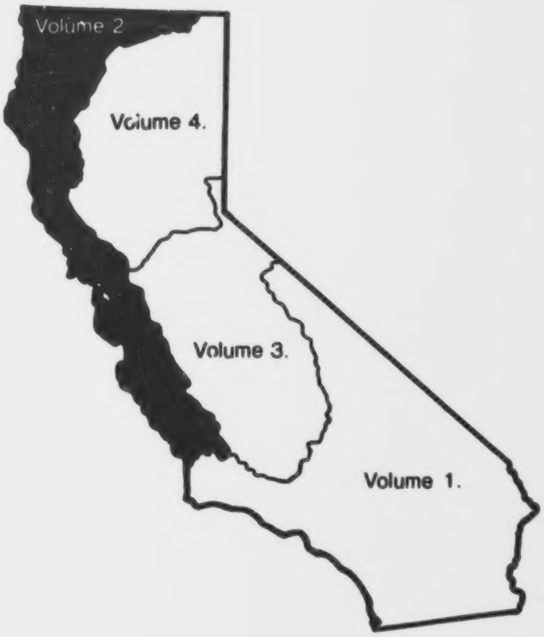
Water Resources Data California Water Year 1988

Volume 2. Pacific Slope Basins from Arroyo Grande to Oregon State Line except Central Valley

by K.L. Markham, J.R. Palmer, W.F. Shelton, and L.F. Trujillo



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA-88-2
Prepared in cooperation with the California Department of
Water Resources and with other agencies

III

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U.S. GEOLOGICAL SURVEY

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Sacramento, California 95825

1989

PREFACE

This volume of the annual hydrologic data report of California is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources. Hydrologic data for California are contained in five volumes:

Volume 1.	Southern Great Basin from Mexican Border to Mono Lake Basin, and Pacific Slope Basins from the Tijuana River to the Santa Maria River
Volume 2.	Pacific Slope Basins from Arroyo Grande to Oregon State Line except Central Valley
Volume 3.	Southern Central Valley Basins and The Great Basin from the Walker River to the Truckee River
Volume 4.	Northern Central Valley Basins and The Great Basin from Honey Lake Basin to Oregon State Line
Volume 5.	Ground-Water Data for California

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to U.S. Geological Survey policy and established guidelines, the individuals contributing significantly to the collection, processing, and tabulation of the data are given on page V.

This report was prepared in cooperation with the California Department of Water Resources and with other agencies, under the general supervision of John M. Klein, District Chief, California.

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15. Supplementary Notes

Prepared in cooperation with the California Department of Water Resources and with other agencies.

16. Abstract (Limit: 200 words)

Water resources data for the 1988 water year for California consist of records of stage, discharge, and water quality of streams; stage and contents in lakes and reservoirs; and water levels and water quality in wells. Volume 2 contains discharge records for 123 gaging stations; stage and contents for 7 lakes and reservoirs; and water quality for 38 stations. Also included is 1 low-flow partial-record station and 22 water-quality partial-record stations. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in California.

17. Document Analysis a. Descriptors

*California, *Hydrologic data, *Surface water, Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediment, Water temperatures, Sampling sites

c. COSATI Field/Group

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SURFACE-WATER AND WATER-QUALITY STATIONS
IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED

[Letters after station name designate type of data: (d), discharge; (l), lake contents; (c), chemical; (b), biological; (p), precipitation; (t), water temperature; and (s), sediment]

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WATER RESOURCES DATA -- CALIFORNIA, WATER YEAR 1988

VOLUME 2--PACIFIC SLOPE BASINS FROM ARROYO GRANDE TO OREGON STATE LINE EXCEPT CENTRAL VALLEY

By K.L. Markham, J.R. Palmer, W.F. Shelton, and L.F. Trujillo

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State agencies, obtains a large amount of data pertaining to the water resources of California each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the U.S. Geological Survey, the data are published annually in this report series entitled "Water Resources Data - California."

This volume of the report includes records on surface water in the State. Specifically, it contains (1) discharge records for 123 streamflow-gaging stations and 1 low-flow partial-record streamflow station (2) stage and contents records for 7 lakes and reservoirs; and (3) water-quality records for 38 streamflow-gaging stations and 22 water-quality partial-record stations. Records included for stream stages are only a small fraction of those obtained during the water year.

The series of annual reports for California began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report format changed to one volume, including data on quantities of surface water, quality of surface and ground water, and ground-water levels. Beginning with the 1985 water year, a separate volume was published for ground-water levels and quality.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for California were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Parts 10 and 11." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." These Water-Supply Papers may be consulted in public libraries of the principal cities of the United States and may be purchased from U.S. Geological Survey, Books and Open-File Reports Section, Federal Center, Building 810, Box 25425, Denver, CO 80225.

Publications similar to this report are published annually by the U.S. Geological Survey for all States. Each report has an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report CA-88-3." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (916) 978-4668.

COOPERATION

The U.S. Geological Survey and organizations of the State of California have had cooperative agreements for the systematic collection of records since 1903. Organizations that supplied data are acknowledged in station descriptions. Organizations that assisted in collecting data through cooperative agreement with the Survey are:

Alameda County Flood Control and Water Conservation District, Robert Bitten, Director of Public Works.
Alameda County Water District, Roy E. Cloverdale, General Manager.
California Department of Water Resources, David N. Kennedy, Director.
Contra Costa County Flood Control and Water Conservation District, Milton Kubicek, Deputy Director.
Humboldt Bay Municipal Water District, Arthur Bolli, General Manager.

Marin Municipal Water District, Richard W. Rogers, General Manager.
Monterey County Flood Control and Water Conservation District, William Hurst, General Manager-Acting District Engineer.
Monterey Peninsula Water Management District, Bruce Buel, General Manager.
San Benito County Water Conservation and Flood Control District, William Rupert, District Manager.

San Francisco Water Department, James D. Cooney, General Manager.
San Luis Obispo County Engineering Department, George Protopapas, County Engineer.
San Mateo County, George Zinckraft, Senior Civil Engineer.
Santa Clara Valley Water District, John T. O'Halloran, General Manager.
Santa Cruz, city of, Water Department, William Kocher, Director.

Santa Cruz County Flood Control and Water Conservation District, Peter Cota-Robles, Director.
Scotts Valley Water District, Jon Sansing, General Manager.
Sonoma County Planning Department, John Dugan, Director.
Sonoma County Water Agency, Robert F. Beach, General Manager.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army; and Bureau of Indian Affairs and National Park Service, U.S. Department of the Interior.

SUMMARY OF HYDROLOGIC CONDITIONS

Surface Water

As is common in California, streamflow varied greatly in the 1988 water year--month by month and regionally. The variations are related to differences in precipitation, temperature, topography, and geology. Runoff during the 1988 water year in the area covered by this volume was 40 percent of the 1951-80 median (based on 10 representative streamflow records). Total runoff in percent of median at selected sites in California is shown in figure 1. Runoff ranged from 63 percent of median at the Smith River at Crescent City (station 11532500) to 17 percent at Saratoga Creek at Saratoga (station 11169500). Monthly mean runoff in the 1988 water year at four index stations is compared to the 1951-80 maximum, minimum, and median monthly mean runoff in figure 2.

Runoff in the 1988 water year was about the 10th driest year of this century. The 1988 drought was comparable in intensity to 1920, 1929, 1933, and 1934; it was considered a critically dry year. In northwestern California, several localities had difficulties due to reduced surface-water supplies. Most affected was the town of Willits, where water was trucked into the city until a temporary Office of Emergency Services pipeline to an alternative source was installed. The counties north of San Francisco Bay had no significant drought-related shortages; those counties south of the bay had very low reservoir storage. On the north-central coast, water supplies were marginally adequate. Mandatory or voluntary conservation measures were enacted in several localities.

A persistent high-pressure ridge off the California coast displaced the usual winter storm path after December, leaving most of the State deficient in precipitation. Although there were several moderate to minor storm periods in December and January, the storms produced no peaks of record and few peaks above base.

Precipitation in the area covered by this volume (based on seven representative precipitation gages) was 60 percent of the long-term average. Precipitation ranged from 82 percent at Crescent City to 48 percent at Pismo Beach.

In anticipation of a third successive less-than-normal water year in 1989, many water agencies limited their reservoir releases to maximize storage. The water year began with reservoir levels below average for October 1. By the end of the water year, storage in major reservoirs was about 80 percent of the 10-year average. Many small to moderate-sized reservoirs were less than 50 percent of capacity.

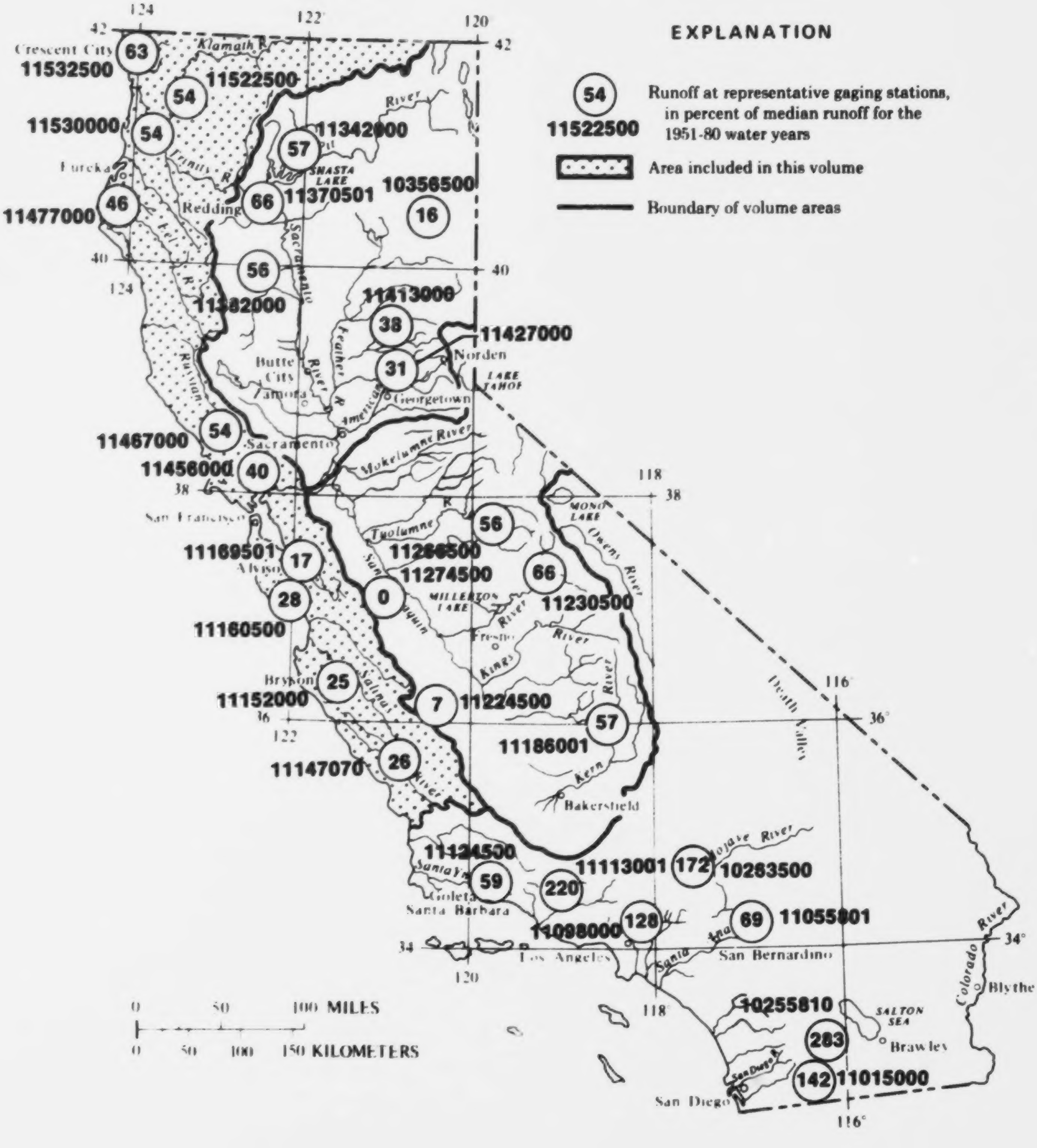
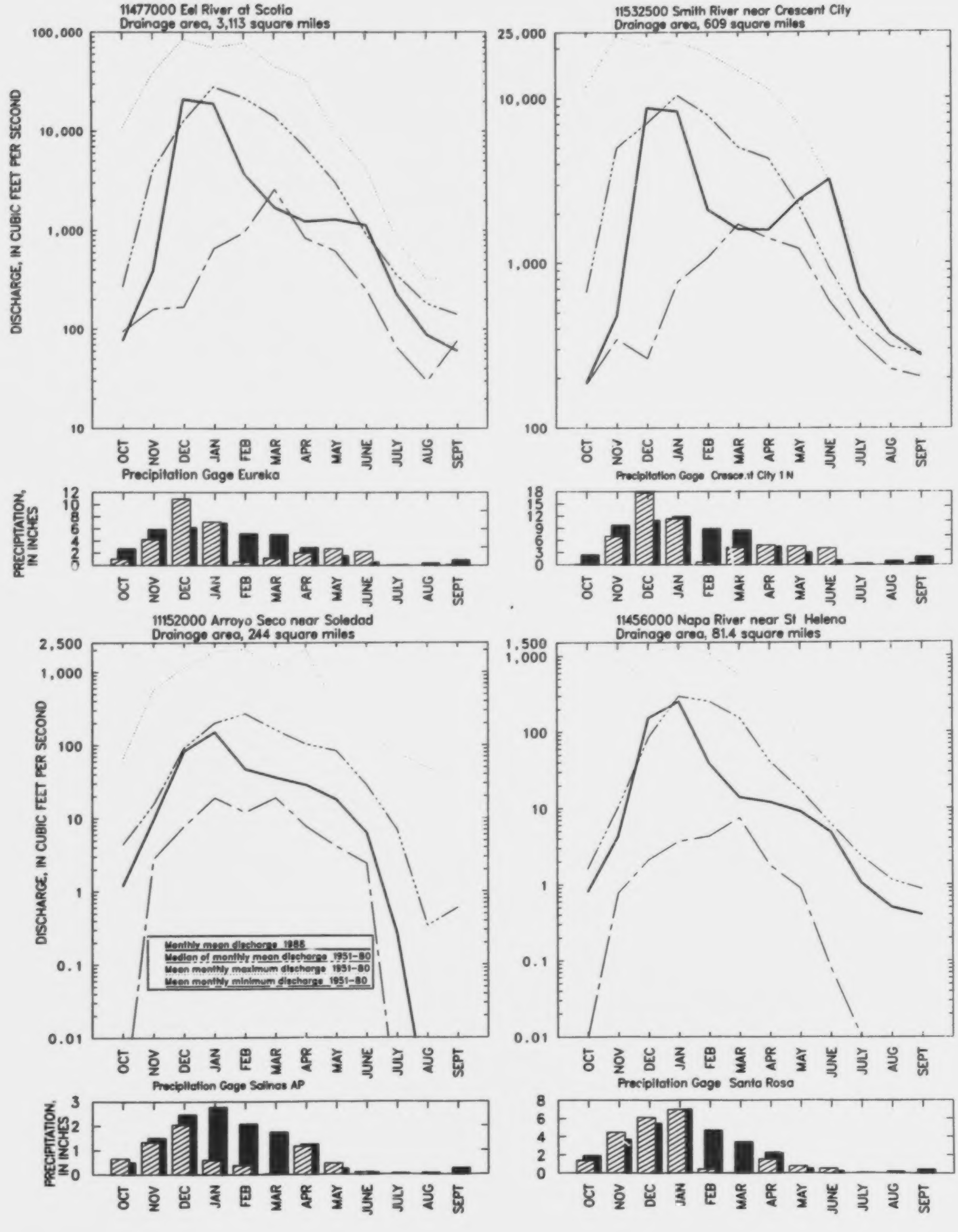

EXPLANATION
54 11522500 Runoff at representative gaging stations, in percent of median runoff for the 1951-80 water years
Area included in this volume
Boundary of volume areas
63 11532500 Crescent City
54 11522500
54 11530000
57 11342000
66 11370501
16 10356500
46 11477000
Eureka
Redding
56 11382000
38 11413000
11427000
31
Norden
Lake Tahoe
Georgetown
Butte City
Tamora
54 11467000
40 11456000
Sacramento
San Francisco
17 11169501
Alviso
28 11160500
0
56 11266500
66 11274500
11230500
Millerton Lake
Mono Lake
Fresno
25 11152000
Bryson
7 11224500
57 11186001
26 11147070
Bakersfield
59 11124500
Santa Barbara
Goleta
220 11113001
172 10263500
128 11098000
69 11055801
Los Angeles
San Bernardino
283 10255810
142 11015000
San Diego
Salton Sea
Brawley
Blythe
Klamath R
Pit River
Shasta Lake
Trinity R
Eel R
Russian
Sacramento River
Feather R
American
Mokelumne River
Tuolumne R
San Joaquin
Kings River
Kern River
Owens River
Salinas River
Santa Ynez
Mojave River
Santa Ana
Colorado River
Death Valley
124
122
120
118
116°
42
40
38
36°
34°
0 50 100 MILES
0 50 100 150 KILOMETERS

Figure 1.-- Runoff, in percent of median, for the 1988 water year.



11477000 Eel River at Scotia
Drainage area, 3,113 square miles

11532500 Smith River near Crescent City
Drainage area, 609 square miles

11152000 Arroyo Seco near Soledad
Drainage area, 244 square miles

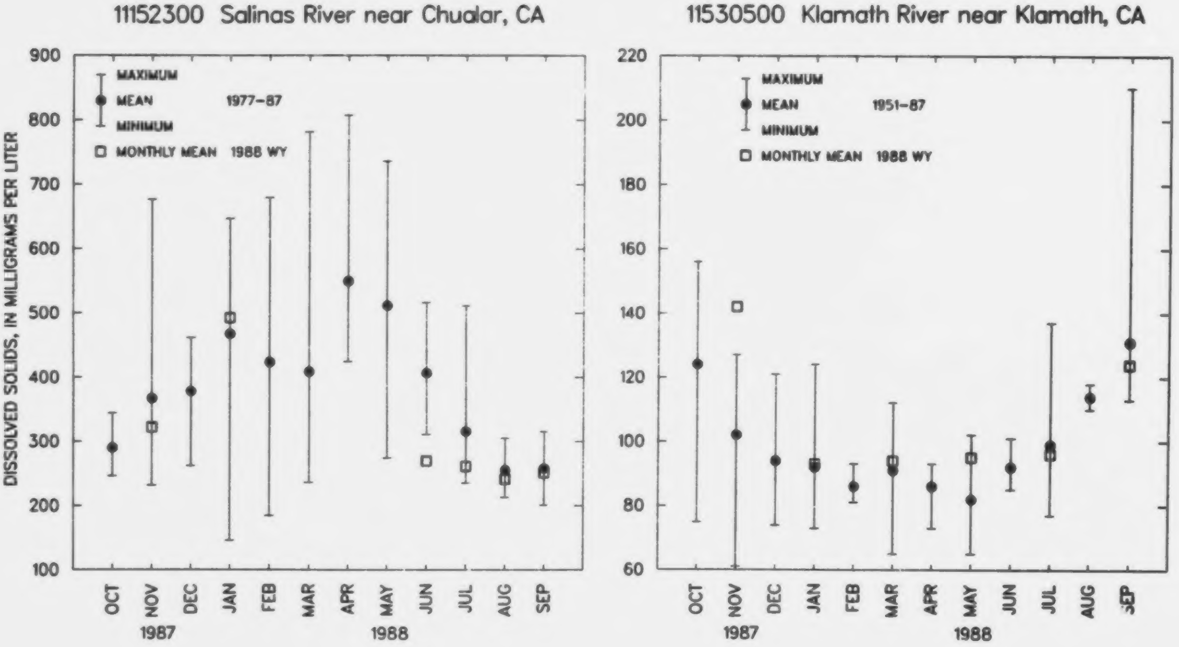
11456000 Napa River near St Helena
Drainage area, 81.4 square miles

Figure 2.-- Comparison of discharge during water year 1988 with long-term discharge statistics and rainfall of four representative gaging stations.

Water Quality

Water samples collected at seven NASQAN stations and one Hydrologic Benchmark station reported in this volume were analyzed for water-quality constituents during the 1988 water year. Dissolved-solids concentrations increased slightly from the previous year and were largest at the Pajaro River near Chittenden (station 11159000), where the median concentration was 792 milligrams per liter. The smallest concentration was in water sampled from the Smith River near Crescent City, where the median concentration was 62 milligrams per liter. The monthly mean dissolved-solids concentrations during water year 1988 are compared with long-term mean dissolved-solids concentrations at two selected stations (fig. 3). There were no chemical constituent concentrations that exceeded water-quality criteria recommended by the U.S. Environmental Protection Agency (EPA). The largest density of fecal-coliform bacteria was measured in water sampled from the Pajaro River near Chittenden, at 390 colonies per 100 milliliters. The largest density of fecal-streptococcus bacteria was measured in water sampled from the Napa River near Napa (station 11458000), at 650 colonies per 100 milliliters.

Of the eight water-quality stations sampled as part of the Golden Gate National Recreation Area study, Table Rock Creek at Stinson Beach in San Francisco had the largest density of fecal coliform bacteria, 670 colonies per 100 milliliters. Of the twelve water-quality stations sampled as part of the Santa Clara Valley surface water-quality study, Los Gatos Creek at Lark Avenue, at Los Gatos (station 11168660) had one sample with manganese (380 micrograms per liter) that exceeded EPA's domestic water-supply criteria of 50 micrograms per liter.


11152300 Salinas River near Chualar, CA

11530500 Klamath River near Klamath, CA

Figure 3.--Comparison of monthly mean dissolved-solids concentrations during water year 1988 with long-term mean dissolved-solids concentrations of two selected stations.

Sediment

Suspended-sediment discharges and concentrations were monitored daily at six stations and periodically at 26 stations in the area included in this volume. Bed-material samples were obtained at seven sites. Monthly and annual bedload discharges were estimated for all daily stations. Sediment-monitoring stations are located as far north as Crescent City in Del Norte County and as far south as Bryson in San Luis Obsipo County. Large variations in precipitation and drainage-basin characteristics result in significant differences in sediment-discharge rates.

Sediment discharge was well below normal during the 1988 water year for all the daily sediment stations included in this volume. Annual sediment discharge was 0.3 percent of average for Cull Creek above Cull Creek Reservoir, near Castro Valley, (1979-87), station 11180960; 16 percent for Redwood Creek at Orick (1971-87), station 11482500; and 3 percent for Grass Valley Creek at Fawn Lodge, near Lewiston, (1976-87), station 11525600.

During the 1988 water year, sediment discharge for the six daily stations ranged from 108 tons per year for Cull Creek above Cull Creek Reservoir, near Castro Valley (5.79 square miles drainage area) to 176,000 tons per year for Redwood Creek at Orick (278 square miles drainage area). Annual sediment yield ranged from a minimum of 19 tons per square mile for Cull Creek above Cull Creek Reservoir, near Castro Valley to a maximum of 633 tons per square mile for Redwood Creek at Orick.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a network of 56 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide. The data provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 408 in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis and reporting that the data may be used for, (2) to describe the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) to detect changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) to provide a nationally consistent data base useful for water-quality assessment and hydrologic research.

EXPLANATION OF THE RECORDS

The surface-water records published in this report are for the 1988 water year that began October 1, 1987, and ended September 30, 1988. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and contents data for lakes and reservoirs, and water-quality data for surface water. The locations of the stations where the data were collected are shown in figures 5 through 21. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each streamsite data station in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for surface-water stations in California where only miscellaneous measurements are made.

Downstream Order System

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports has been in a downstream direction along the main stream. All stations on a tributary entering upstream from a main-stream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indentation in the "List of Stations" in the front of this report. Each indentation represents one rank. This downstream order and system of indentation show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station such as 11465350, which appears just to the left of the station name, includes the two-digit part number "11" plus the six-digit downstream-order number "465350." The part number designates the major river basin; for example, part "11" is the Pacific Slope Basins in California.

Latitude-Longitude System

The identification numbers for miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the other sites within a 1-second grid. This site-identification number, once assigned, is a pure number and has no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description (fig. 4).

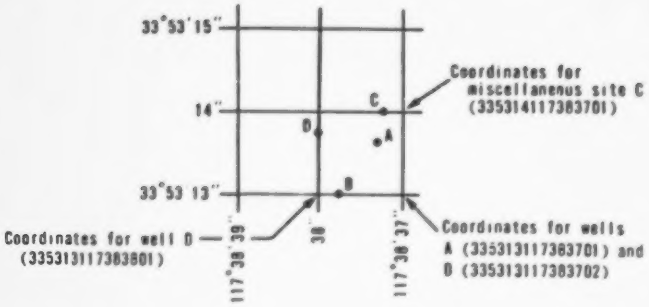

33°53'15"
14"
33°53'13"
117°38'39"
38"
117°38'37"
A
B
C
D
Coordinates for miscellanenus site C (335314117383701)
Coordinates for well D (335313117383801)
Coordinates for wells A (335313117383701) and B (335313117383702)

Figure 4.--System for numbering miscellaneous sites (latitude and longitude).

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake and reservoir contents, similarly, are those for which stage or contents may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a continuous stage-recording device, but need not be. Because daily mean discharges and end-of-day contents commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report. Location of all complete-record and partial-record stations for which data are given in this report are shown, by county, in figures 5 through 21.

Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relationships between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relationship between stage and lake contents. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage or with digital recorders that punch stage values on paper tapes at selected time intervals. Measurements of discharge are made with current meters using methods adapted by the U.S. Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in U.S. Geological Survey Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations (TWRI), Book 3, Chapter A6.

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge are prepared for any stage within the range of the measurements. If it is necessary to define extremes of discharge outside the range of current-meter measurements, the curves are extended using (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow-over-dam or weirs; or (4) step-backwater techniques.

Daily mean discharges are computed by applying the daily mean stages (gage heights) to the stage-discharge curves or tables. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may so obscure the stage-discharge relations that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes or observations, and records for other stations in the same or nearby basins for comparable periods.

At some stream-gaging stations the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

In computing records of lake or reservoir contents, it is necessary to have available surveys, curves, or tables defining the relationship of stage and contents. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly, or yearly changes then are determined. If the stage-content relationship changes because of deposition of sediment in a lake or reservoir, periodic resurveys may be necessary to redefine the relationship. When this is done, the contents computed may become increasingly in error as time increases since the last survey. Discharges over lake or reservoir spillways are computed from stage-discharge relationships, in the same manner as other stream discharges are computed.

For some gaging stations there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

The records published for each gaging station consist of two parts, the manuscript or station description and the data table for the current water year. The manuscript provides, under various headings, descriptive information, such as station location; period of record; average discharge; historical extremes; record accuracy; and other remarks pertinent to station operation and regulation.

The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages, given for only a few stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one that was in operation at a time when the present station was not, and whose location was such that records from it can reasonably be considered equivalent with records from the present station.

REVISED RECORDS.--Published records, because of new information, occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to National Geodetic Vertical Datum of 1929 (see Definition of Terms), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily-discharge record will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily-discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a remarks statement is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computation, to conditions that affect natural flow at the station, and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

COOPERATION.--Records provided by a cooperating organization or obtained for the U.S. Geological Survey by a cooperating organization are identified.

AVERAGE DISCHARGE.--The discharge value given is the arithmetic mean of the water-year mean discharges. It is computed only for stations having at least 5 water years of complete record, and only water years of complete record are included in the computation. It is not computed for stations where diversions, storage, or other water-use practices cause the value to be meaningless. If water developments significantly altering flow at a station are put into use after the station has been in operation for a period of years, a new average is computed as soon as 5 water years of record have accumulated following the development. The median of yearly mean discharges also is given under this heading for stations having 10 or more water years of record, if the median differs from the average given by more than 10 percent.

EXTREMES FOR PERIOD OF RECORD.--Extremes may include maximum and minimum discharges or content. Unless otherwise qualified, the maximum discharge or content is the instantaneous maximum corresponding to the highest stage that occurred. The highest stage may have been obtained from a graphic or digital recorder, a crest-stage, or by direct observation of a nonrecording gage. If the maximum stage did not occur on the same day as the maximum discharge or content, it is given separately. Similarly, the minimum is the instantaneous minimum discharge, unless otherwise qualified, and was determined and is reported in the same manner as the maximum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Included is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the U.S. Geological Survey.

EXTREMES FOR CURRENT YEAR.--Extremes given are similar to those for the period of record, except the peak discharge listing may include secondary peaks. For stations meeting certain criteria, all peak discharges and stages occurring during the water year and greater than a selected base discharge are presented under this heading. The peaks greater than the base discharge, excluding the highest one, are referred to as secondary peaks. Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial control by man. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330. The minimum for the current water year appears below the table of peak data.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possible, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the District office to determine if the published records were revised after the station was discontinued. If the data were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the "Remarks" and in the inclusion of a skeleton storage-capacity table when daily contents are given.

The daily table for stream-gaging stations gives mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed "CFSM"), in inches (line headed "IN"), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. In the yearly summary below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversions or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of discharge measurements at low-flow partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified either by flagging individual daily values with the letter symbol "e" and printing the table footnote, "e Estimated," or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

Accuracy of the Records

The accuracy of streamflow records depends primarily on (1) the stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements; and (2) the accuracy of measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of the true; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned, are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second (ft^3/s) for values less than 1 ft^3/s, to the nearest tenth between 1.0 and 10 ft^3/s, to whole numbers between 10 and 1,000 ft^3/s, and to three significant figures for more than 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff, in inches, are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other Records Available

The National Water Data Exchange (NAWDEX), U.S. Geological Survey, Reston, VA 22092, maintains an index of sites as well as an index of records of discharge collected by other agencies but not published by the U.S. Geological Survey. Information on records at specific sites can be obtained from that office upon request.

Information used in the preparation of the records in this publication, such as discharge measurement notes, gage-height records, temperature measurements, and rating tables are on file in the California District office. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the District office.

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be one or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station, where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figures 5 through 21.

Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

Onsite Measurements and Sample Collection

In obtaining water-quality data, a major concern is the assurance that the data obtained represent the in-situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, are made onsite when samples are taken. To assure that measurements made in the laboratory also represent the in-situ water, carefully prescribed procedures are followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in "Techniques of Water-Resources Investigations," Book 1, Chapter D2; Book 3, Chapter C2; Book 5, Chapters A1, A3, and A4. All these references are listed on p. 20 of this report. Also, detailed information on collecting, treating, and shipping samples may be obtained from the California District office.

One sample can adequately define the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals depends on flow conditions and other factors which must be evaluated by the collector.

Chemical-quality data published in this report are considered to be the most representative value available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum and minimum values for each constituent measured and are based on hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the District office whose address is given on the back of the title page of this report.

Water Temperature

Water temperatures are measured at the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements are on file in the District office.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross section.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observation, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of suspended-sediment discharge, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

Estimates of bedload and total-sediment discharge are included for some stations. Computations of monthly bedload discharges are based on the relation between instantaneous water discharge and corresponding bedload discharge for the station. Values of bedload discharge used in defining this relation are based on samples obtained by use of the Helley-Smith bedload sampler or by modified-Einstein or Meyer-Peter Muller computation procedures. Application of the bedload-transport relation at a station was made on a daily basis or subdivided-day basis. The Helley-Smith sampler is designed to collect a time-weighted sample for the sediment moving within 0.25 ft of the streambed. Sediment moving in this portion of the flow cannot be sampled with standard suspended-sediment samplers. Calibration of the Helley-Smith sampler has not been completed, and a trap efficiency of 1.0 has been assumed applicable to this device. Error sources in the theoretical methods, based on analysis of bed-material characteristics, channel geometry, and associated hydraulic factors, are also defined. In consequence, figures of bedload discharge must be used with caution. They are estimates, at best, and are subject to revision.

Cross-Sectional Data

Cross-sectional surveys of water temperature, pH, specific conductance, dissolved oxygen, and suspended sediment are done at all NASQAN and Hydrologic Bench-mark stations during various seasons and surface-water discharges. Documentation of cross-section variation of water quality is essential in order to determine how many samples in a cross section are necessary to ensure a representative composite sample.

Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the U.S Geological Survey's National Water-Quality Laboratory in Arvada, Colorado. Methods used in analyzing sediment samples and computing sediment records are given in Techniques of Water-Resources Investigations, Book 5, Chapter C1; methods used by the laboratories are given in Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4.

Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and other data obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the individual parameters.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor temperature record, sediment pumping sampler, or other sampling device is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the U.S. Geological Survey by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to ensure the most recent updates.

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

Remark Codes

The following remark codes may appear with the water-quality data in this report:

PRINTED OUTPUT	REMARK
E	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the acceptable range (non-ideal colony count)
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted)
D	Biological organism count equal to or greater than 15 percent (dominant)
&	Biological organism estimated as dominant
*	Instantaneous streamflow at the time of cross-sectional measurements
1	Laboratory value

ACCESS TO WATSTORE DATA

The National WATer Data STOrage and REtrieval System (WATSTORE) was established for handling water data collected through the activities of the U.S. Geological Survey and to provide more effective and efficient means of releasing the data to the public. The system is operated and maintained on the central computer facilities of the Survey at its National Center in Reston, Virginia.

WATSTORE can provide a variety of useful products ranging from simple data tables to complex statistical analyses. A minimal fee, plus the actual computer cost incurred in producing a desired product, is charged to the requester. Information about the availability of specific types of data, the acquisition of data or products, and user charges can be obtained locally from each of the Water Resources Division's District offices (see address given on the back of the title page).

General inquiries about WATSTORE may be directed to:

Chief Hydrologist
U.S. Geological Survey
437 National Center
Reston, VA 22092

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report are defined below. See the table for converting inch-pound units to International System (SI) Units on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Adenosine triphosphate (ATP) is an organic, phosphate-rich, compound important in the transfer of energy in organisms. Its central role in living cells makes it an excellent indicator of the presence of living material in water. A measure of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter of the original water sample.

Algae are mostly aquatic single-celled, colonial, or multicelled plants, containing chlorophyll and lacking roots, stems, and leaves.

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer tapped by a well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease; others perform an essential role in nature in the recycling of materials, for example, decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35 °C. For the membrane filter method these bacteria are defined as the organisms which produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35 °C ± 0.5 °C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milligrams per liter of sample.

Fecal-coliform bacteria are bacteria that are present in the intestines or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. For the membrane filter method they are defined as all organisms which produce blue colonies within 24 hours when incubated at 44.5 °C ± 0.2 °C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milligrams per liter of sample.

Fecal-streptococcal bacteria are bacteria found in intestines of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. For the membrane filter method they are defined as all the organisms which produce red or pink colonies within 48 hours at 35 °C ± 0.5 °C on KF streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milligrams per liter of sample.

Bed material is the unconsolidated material of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Benthic organisms (invertebrates) are the group of animals living in or on the bottom of an aquatic environment. They include a number of types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by micro-organisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area or volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500 °C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m^3) and periphyton and benthic organisms in grams per square meter (g/m^2).

Dry mass refers to the mass of residue present after drying in an oven at 105 °C for zooplankton and periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and ash mass, and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Cell volume determination is one of several common methods used to estimate biomass of algae in aquatic systems. Cell numbers of algae are frequently used in aquatic surveys as an indicator of algal production. However, cell numbers alone cannot represent true biomass because of considerable cell-size variation among the algal species. Cell volume (μm^3) is determined by obtaining critical cell measurements on cell dimensions (that is, length, width, height, or radius) for 20 to 50 cells of each important species to obtain an average biovolume per cell. Cells are categorized according to the correspondence of their cellular shape to the nearest geometric solid or combinations of simple solids (that is, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

sphere $4/3\ \pi r^3$ cone $1/3\ \pi r^3 h$ cylinder $\pi r^3 h$.

From cell volume, total algal biomass expressed as biovolume (μm^3/mL) is thus determined by multiplying the number of cells of a given species by its average cell volume and then summing these volumes over all species.

Cells per volume (cells/volume) refers to the number of cells of any organism that are counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually in milliliters (mL) or liters (L).

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common pigments in plants.

Color unit is produced by 1 milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of saltwater.

Cubic foot per second (ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Cubic foot per second-day (cfs.d) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, or about 646,000 gallons or 2,445 cubic meters.

Discharge is the volume of water (or more broadly, total fluid plus suspended sediment), that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved refers to that material in a representative water sample which passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate. It is recognized that certain kinds of samples cannot be filtered; to provide for this, procedures that are considered equivalent to filtering through a 0.45-micrometer membrane filter will be identified and announced at a later date.

Dissolved-solids concentration of water is determined either analytically or by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

Diversity index is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$\bar{d} = \sum_{i=1}^{s} \frac{n_i}{n} \log^{2} \frac{n_i}{n},$$

where n_i is the number of individuals per taxon, n is the total number of individuals, and s is the total number of taxa in the sample of the community. Diversity index values range from zero, when all the organisms in the samples are the same; to some positive number, when some or all the organisms in the sample are different.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given include all closed basins, or noncontributing areas, within the area unless otherwise noted.

Drainage basin is a part of the surface of the Earth that is occupied by a drainage system, which consists of a surface stream or body of impounded surface water, together with all tributary surface streams and bodies of impounded surface water.

Gage datum is the elevation of the zero point of the reference gage from which gage height is determined as compared to the National Geodetic Vertical Datum of 1929. This elevation is established by a system of levels from known bench marks or by approximation from topographic maps.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gage station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap that is required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ($CaCO_3$).

Hydrologic Bench-Mark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an eight-digit number.

Light-attenuation coefficient, also known as the extinction coefficient, is a measure of water clarity. Light is attenuated according to the Lambert-Beer equation

$$I = I_o e^{-\lambda L},$$

where I_o is the source light intensity, I is the light intensity at length L (in meters) from the source, λ is the light-attenuation coefficient, and e is the base of the natural logarithm. The light-attenuation coefficient is defined as

$$\lambda = -\frac{1}{L} \log_e \frac{I}{I_o}.$$

Macrophytes are the macroscopic plants in the aquatic environment. The most common macrophytes are the rooted vascular plants that are usually arranged in zones in aquatic ecosystems and restricted in the area by the extent of illumination through the water and sediment deposition along the shoreline.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This development process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-pupa-adult or egg-nymph-adult.

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic detergent compounds.

Micrograms per gram (UG/G, ug/g) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per liter (UG/L, ug/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represent the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in milligrams per liter and is based on the mass of sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called Sea Level Datum of 1929 or mean sea level in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 408 sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting that the data may be used for, (2) to describe the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) to detect changes in trends with time in the pattern occurrence of water-quality characteristics, and (4) to provide a nationally consistent data base useful for water-quality assessment and hydrologic research.

Nekton are the consumers in the aquatic environment and consist of large free-swimming organisms that are capable of sustained, directed mobility.

Organism is any living entity, such as an insect, phytoplankter, or zooplankter.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per unit area of the habitat, usually square meter (m^2), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Parameter code is a five-digit number used in the U.S. Geological Survey computerized data system, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

Partial-record station is a site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of a particle determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay..........	0.00024-0.004	Sedimentation
Silt..........	0.004-0.062	Sedimentation
Sand..........	0.062-2.0	Sedimentation or sieve
Gravel........	2.0-64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native water analysis.

Percent composition or percent of total is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, weight, or volume.

Periphyton is the assemblage of micro-organisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, the periphyton also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton are useful indicators of water quality.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides, which control insects and plants respectively, are the two categories reported.

pH of water is the negative logarithm of the hydrogen-ion activity. Solutions with pH less than 7 are termed "acidic," and solutions with a pH greater than 7 are termed "basic." Solutions with a pH of 7 are neutral. The presence and concentration of many dissolved chemical constituents found in water are, in part, influenced by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms are also influenced, in part, by the hydrogen-ion activity of water.

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{12} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Plankton are suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton compose the plant part of the plankton. They are usually microscopic, and their movement is subject to water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials into the surrounding water, the phytoplankton have a profound effect on the quality of the water. They are the primary food producers in the aquatic environment and are commonly known as algae.

Phytoplankton--Continued

Blue-green algae are phytoplankton organisms having a blue pigment in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algal mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms, chiefly green plants. The rate of primary production is estimated by measuring the amount of carbon assimilated by plants (carbon method) or the amount of oxygen released (oxygen method).

Milligrams of carbon per area or volume per unit time [mg $C/(m^2/time)$ for periphyton and macrophytes and mg $C/(m^3/time)$ for phytoplankton] are the units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon-14). The carbon-14 method is of greater sensitivity that the oxygen light- and dark-bottle method, and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [mg $O_2/(m^2/time)$ for periphyton and macrophytes and mg $O_2/(m^3/time)$ for phytoplankton] are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light- and dark-bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

Radiochemical Program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment; thus, the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material such as humus. The quantity, characteristics, and cause of occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Bedload is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed and very close to it. In this report, bedload is considered to consist of particles in transit within 0.25 ft (0.076 m) of the streambed.

Bedload discharge (tons per day) is the quantity of sediment, as measured by dry weight, that moves past a section as bedload in a given time.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour period.

Suspended-sediment discharge (tons per day) is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day by multiplying discharge times milligrams per liter times 0.0027.

Suspended-sediment load (tons per day) is a general term that refers to material in suspension. It is not synonymous with either discharge or concentration.

Total-sediment discharge or total-sediment load (tons per day) is the sum of suspended-sediment discharge and the bedload discharge. It is the total quantity of sediment, as measured by dry mass, that passes a section in a given time.

Total-sediment load or total load is a term which refers to the total sediment (bed load plus suspended-sediment load) that is in transport. It is not synonymous with total-sediment discharge.

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions with soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 °C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content in water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height (stage) and the volume of water, per unit of time, flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff." Streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physical surface upon which an organism lives.

Natural substrate refers to any naturally occurring emersed or submersed solid surface, such as a rock or tree, upon which an organism lives.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic-organism collection and plexiglass strips for periphyton collection.

Surface area of a lake is the area, in square miles or acres, outlined on the latest U.S. Geological Survey topographic map as the boundary of the lake and measured by a planimeter. In localities not covered by topographic maps, the areas are computed from the best maps available. Areas shown are for the lake stage at the time the map was made.

Surficial bed material is the part (upper 0.1 to 0.2 ft or 0.03 to 0.06 m) of the bed material that is sampled by using U.S. Series Bed-Material Samplers.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. The water-sediment mixture is associated with (or sorbed on) the material retained on a 0.45-micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45-micrometer membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment; thus, the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, Hexagenia limbata is the following:

Kingdom.................	Animal
Phylum..................	Arthropoda
Class...................	Insecta
Order...................	Ephemeroptera
Family..................	Ephemeridae
Genus...................	Hexagenia
Species.................	Hexagenia limbata

Thermograph is a thermometer that continuously and automatically records, on a chart, the water temperature of a stream. "Temperature recorder" is the term used to indicate the presence of a thermograph or a digital mechanism that records water temperature in a digital format on punched paper tape.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration in milligrams per liter by 0.00136.

Tons per day (T/DAY) is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

Total load (tons) is the total amount of any individual constituent, as measured by dry mass or volume, that is dissolved in a specific amount of water (discharge) during a given time. It is computed by multiplying the total discharge, times the milligrams per liter of the constituent, times the factor 0.0027, times the number of days.

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment; thus, the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses, because different digestion procedures are likely to produce different analytical results.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in the dissolved and suspended phases of the sample. A knowledge of the expected form is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determines all the constituent in the sample.)

Turbidity of a sample is the reduction of transparency due to the presence of particulate matter. In this report it is expressed in Nephelometric turbidity units (NTU), obtained from the Nephelometric method for turbidity determination which measures the intensity of light scattered by suspended particles at 90° from the path of incident light source.

Water year in U.S. Geological Survey reports dealing with surface-water supply is the 12-month period, October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1988, is called the "1988 water year."

WDR is used as an abbreviation for "Water-Data Reports" in the summary REVISIONS paragraph to refer to previously published State annual basic-data reports.

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

WSP is used as an abbreviation for "Water-Supply Paper" in reference to previously published reports.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S. Geological Survey, Books and Open-File Reports Section, Federal Center, Box 25425, Building 810, Denver, CO 80225. Prepayment is required. Remittance should be sent by check or money order payable to U.S. Geological Survey, Department of the Interior. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

1-D1. Water temperature--influential factors, field measurement, and data presentation, by H.H. Stevens, Jr., J.F. Ficke, and G.F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.

1-D2. Guidelines for collection and field analysis of ground-water samples for selected unstable constituents, by W.W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.

2-D1. Application of surface geophysics to ground-water investigations, by A.A.R. Zohdy, G.P. Eaton, and D.R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.

2-E1. Application of borehole geophysics to water-resources investigations, by W.S. Keys, and L.M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.

3-A1. General field and office procedures for indirect discharge measurements, by M.A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.

3-A2. Measurement of peak discharge by slope-area method, by Tate Dalrymple and M.A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.

3-A3. Measurement of peak discharge at culverts by indirect methods, by G.L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.

3-A4. Measurement of peak discharge at width contractions by indirect methods, by H.F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.

3-A5. Measurement of peak discharge at dams by indirect methods, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.

3-A6. General procedure for gaging streams, by R.W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.

3-A7. Stage measurements at gaging stations, by T.J. Buchanan and W.P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.

3-A8. Discharge measurements at gaging stations, by T.J. Buchanan and W.P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.

3-A9. Measurement of time of travel and dispersion in streams by dye tracing, by E.F. Hubbard, F.A. Kilpatrick, L.A. Martens, and J.F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1982. 44 pages.

3-A10. Discharge ratings at gaging stations, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.

3-A11. Measurement of discharge by moving-boat method, by G.F. Smoot and C.E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.

3-A12. Fluorometric procedures for dye tracing, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS--TWRI Book 3, Chapter A12. 1986. 41 pages.

3-A13. Computation of continuous records of streamflow, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.

3-A14. Use of flumes in measuring discharge, by F.A. Kilpatrick and V.R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.

3-A15. Computation of water-surface profiles in open channels, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.

3-A16. Measurement of discharge using tracers, by F.A. Kilpatrick and E.D. Cobb: USGS--TWRI Book 3, Chapter A16. 1985. 52 pages.

3-A17. Acoustic velocity meter systems, by Antonius Laenen: USGS--TWRI Book 3, Chapter A17. 1985. 38 pages.

3-B1. Aquifer-test design, observation, and data analysis, by R.W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.

3-B2. Introduction to ground-water hydraulics, a programmed text for self-instruction, by G.D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.

3-B3. Type curves for selected problems of flow to wells in confined aquifers, by J.E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.

3-B5. Definition of boundary and inital conditions in the analysis of saturated ground-water flow systems--An introduction, by O.L. Franke, T.E. Reilly, and G.D. Bennett: USGS--TWRI Book 3, Chapter B5. 1987. 15 pages.

3-B6. The principle of superposition and its application in ground-water hydraulics, by T.E. Reilly, O.L. Franke, and G.D. Bennett: USGS--TWRI Book 3, Chapter B6. 1987. 28 pages.

3-C1. Fluvial sediment concepts, by H.P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.

3-C2. Field methods for measurement of fluvial sediment, by H.P. Guy and V.W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.

3-C3. Computation of fluvial sediment discharge, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.

4-A1. Some statistical tools in hydrology, by H.C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.

4-A2. Frequency curves, by H.C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.

4-B1. Low-flow investigations by H.C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.

4-B2. Storage analyses for water supply, by H.C. Riggs and C.H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.

4-B3. Regional analyses of streamflow characteristics, by H.C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.

4-D1. Computation of rate and volume of stream depletion by wells, by C.T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.

5-A1. Methods for determination of inorganic substances in water and fluvial sediments, edited by M.W. Skougstad and others: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages.

5-A2. Determination of minor elements in water by emission spectroscopy, by P.R. Barnett and E.C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.

5-A3. Methods for analysis of organic substances in water, by D.F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages.

5-A4. Methods for collection and analysis of aquatic biological and microbiological samples, edited by P.E. Greeson, T.A. Ehlke, G.A. Irwin, B.W. Lium, and K.V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 322 pages.

5-A5. Methods for determination of radioactive substances in water and fluvial sediments, by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: UGSG--TWRI Book 5, Chapter A5. 1977. 95 pages.

5-A6. Quality assurance practices for the chemical and biological analyses of water and fluvial sediments, by L.C. Friedman, and D.E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 pages.

5-C1. Laboratory theory and methods for sediment analysis, by H.P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.

6-A1. A modular three-dimensional finite-difference ground-water flow model, by M.G. McDonald and A.W. Harbaugh: USGS-TWRI Book 6, Chapter A1. 1988. 586 pages.

7-C1. Finite difference model for aquifer simulation in two dimensions with results of numerical experiments, by P.C. Trescott, G.F. Pinder, and S.P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.

7-C2. Computer model of two-dimensional solute transport and dispersion in ground water, by L.F. Konikow and J.D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.

7-C3. A model for simulation of flow in singular and interconnected channels by R.W. Shaffrannek, R.A. Baltzer, and D.E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.

8-A1. Methods of measuring water levels in deep wells, by M.S. Garber and F.C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.

8-A2. Installation and service manual for U.S. Geological Survey manometers, by J.D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.

8-B2. Calibration and maintenance of vertical-axis type current meters, by G.F. Smoot and C.E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

DISCONTINUED WATER-QUALITY STATIONS

The following water-quality stations reported in this volume have been discontinued as of the 1988 water year. Continuous records of water quality and sediment were collected and published for the period of record shown.

Station No.	Station name	Drainage area (mi^2)	Type of record	Period of record
11460110	Gerbode Valley Creek near Sausalito	3.29	C,S	1987-88
11460120	Rodeo Lagoon at Fort Cronkhite, near Sausalito	4.07	C	1987-88
11460130	Tennessee Valley Creek near Tamalpais Valley	1.81	C,S	1987-88
11460140	Redwood Creek below Muir Woods, near Mill Valley	4.11	C,S	1987-88
11460152	Redwood Creek at Muir Beach, near Tamapais Valley	7.29	C,S	1986-88
11460154	Green Gulch at Muir Beach, near Tamapias Valley	1.15	C,S	1986-88
11460156	Webb Creek near Stinson Beach	1.12	C,S	1986-88
11460156	Table Rock at Stinson Beach	1.34	C,S	1986-88
394756123165701	Town Creek near Covelo	Not determined	C	1988
394922123114901	Short Creek near Covelo	Not determined	C	1988
395017123163501	Mill Creek above Medicine Hill, near Covelo	Not determined	C	1988

Type of record: C (chemical data); S (sediment).

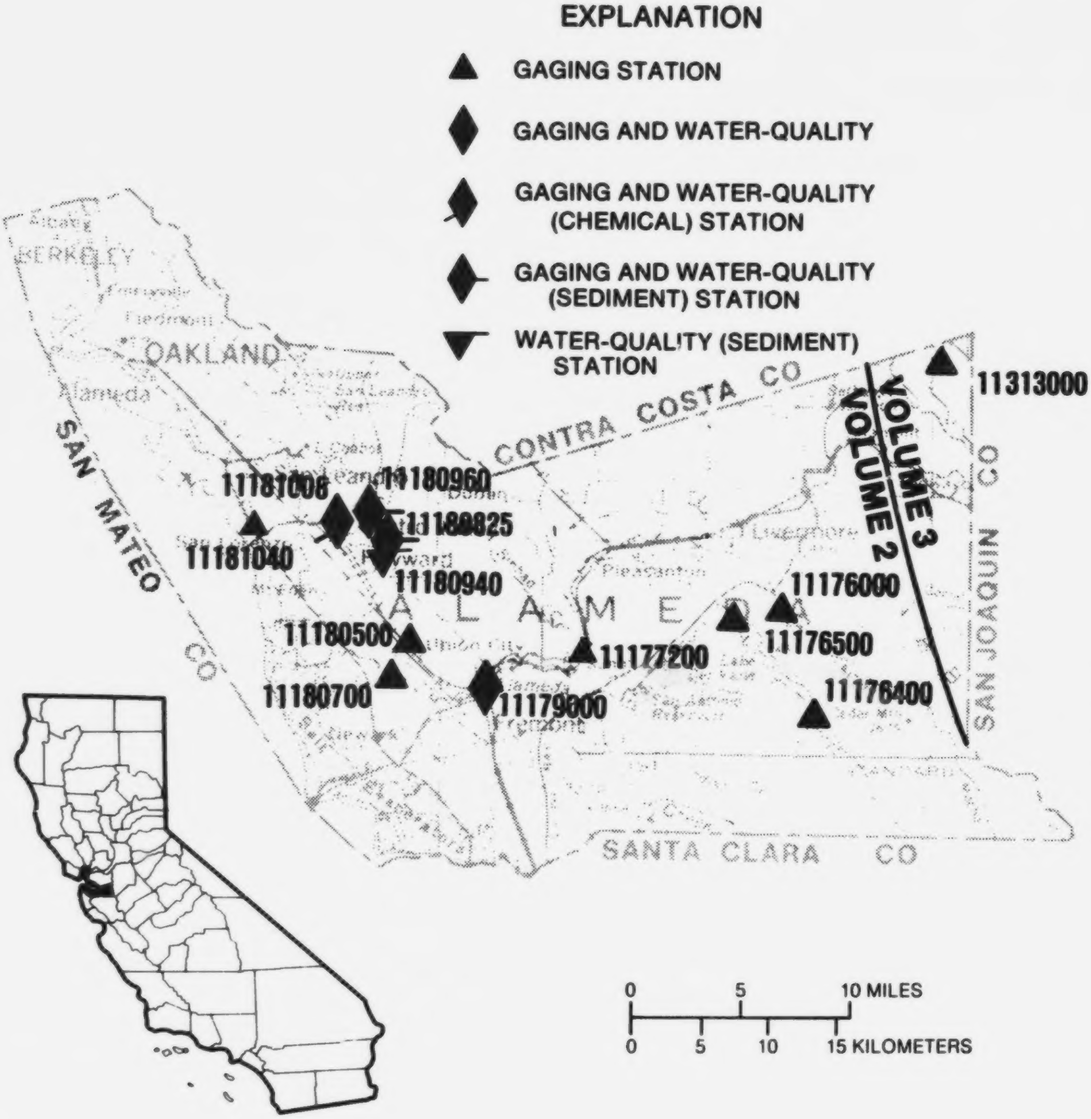

EXPLANATION
▲ GAGING STATION
◆ GAGING AND WATER-QUALITY
GAGING AND WATER-QUALITY (CHEMICAL) STATION
GAGING AND WATER-QUALITY (SEDIMENT) STATION
▼ WATER-QUALITY (SEDIMENT) STATION
BERKELEY
Piedmont
OAKLAND
Alameda
SAN MATEO CO
CONTRA COSTA CO
SAN JOAQUIN CO
SANTA CLARA CO
ALAMEDA
VOLUME 3
VOLUME 2
Hayward
Pleasanton
Livermore
Fremont
11313000
11181008
11180960
11180825
11181040
11180940
11176000
11180500
11177200
11176500
11180700
11179000
11176400
0 5 10 MILES
0 5 10 15 KILOMETERS

Figure 5.--Location of discharge and water-quality stations in Alameda County. (Note: Record for station 11313000 published in volume 3)

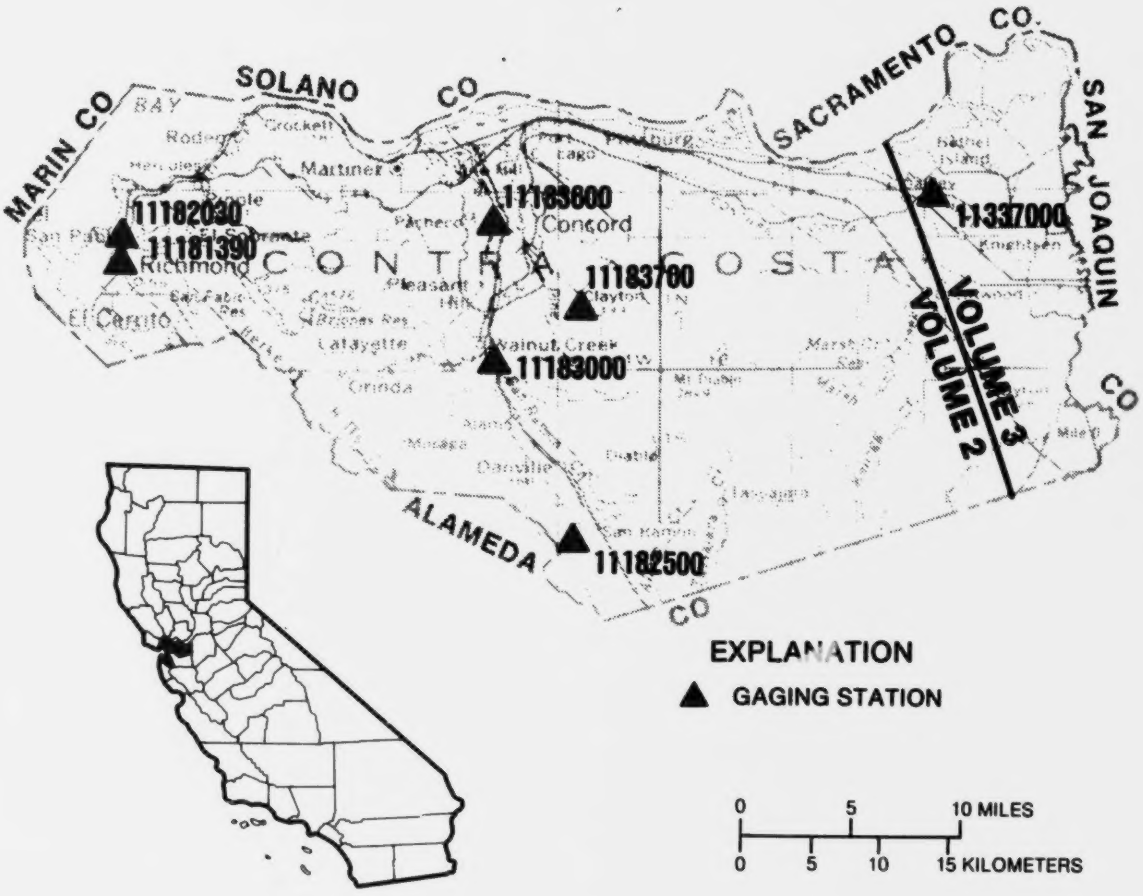

SOLANO CO
SACRAMENTO CO.
SAN JOAQUIN CO
MARIN CO
ALAMEDA CO
BAY
CONTRA COSTA
Richmond
El Cerrito
Concord
Martinez
Walnut Creek
Clayton
Orinda
Lafayette
Danville
San Ramon
11182030
11181390
11183600
11183700
11183000
11182500
11337000
VOLUME 3
VOLUME 2
EXPLANATION
GAGING STATION
0 5 10 MILES
0 5 10 15 KILOMETERS

Figure 6.-- Location of discharge stations in Contra Costa County.
(Note: Record for station 11337000 published in volume 3)

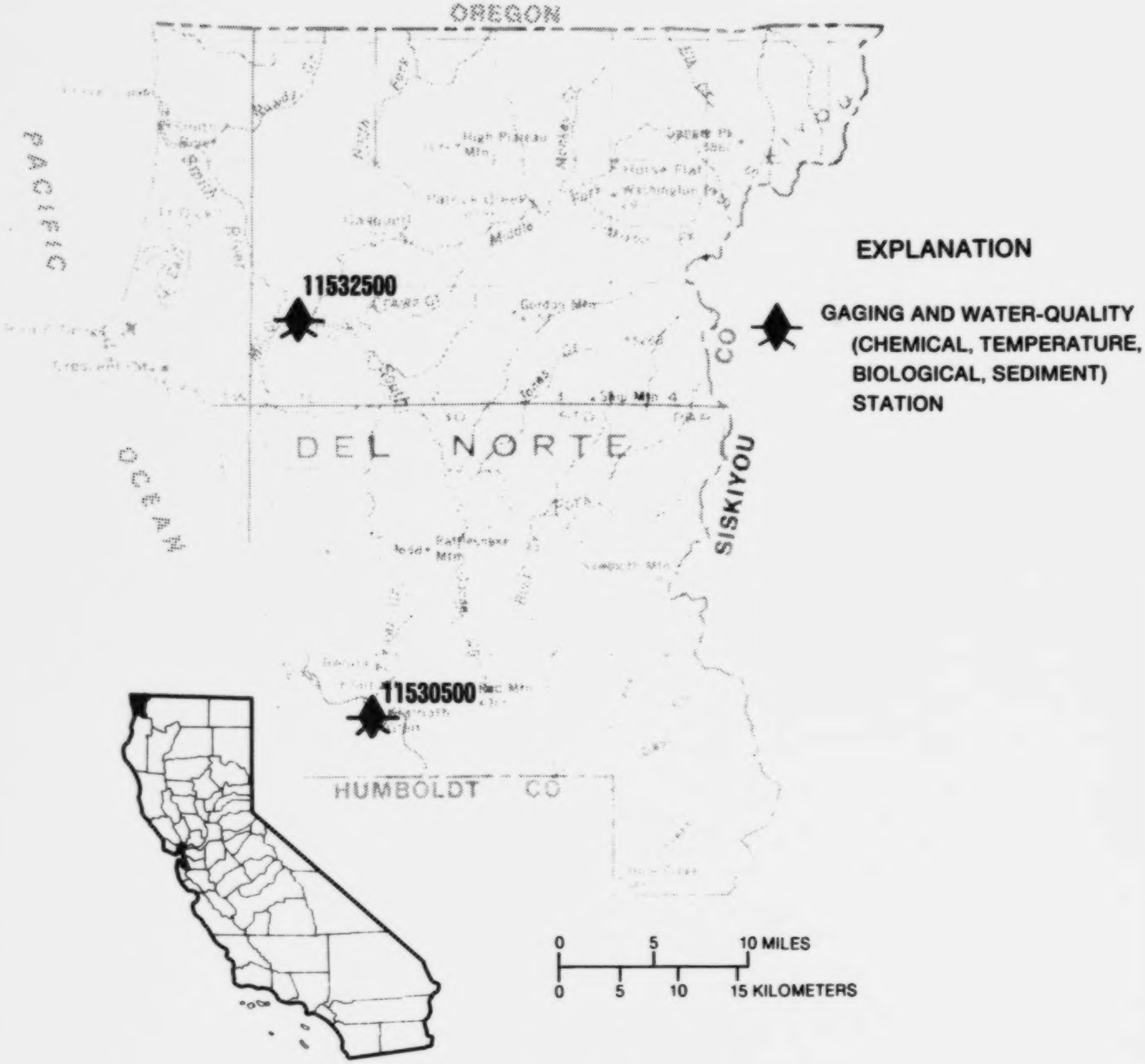

OREGON
PACIFIC OCEAN
11532500
DEL NORTE
SISKIYOU CO
11530500
HUMBOLDT CO
EXPLANATION
GAGING AND WATER-QUALITY (CHEMICAL, TEMPERATURE, BIOLOGICAL, SEDIMENT) STATION
0 5 10 MILES
0 5 10 15 KILOMETERS

Figure 7.--Location of discharge and water-quality stations in Del Norte County.

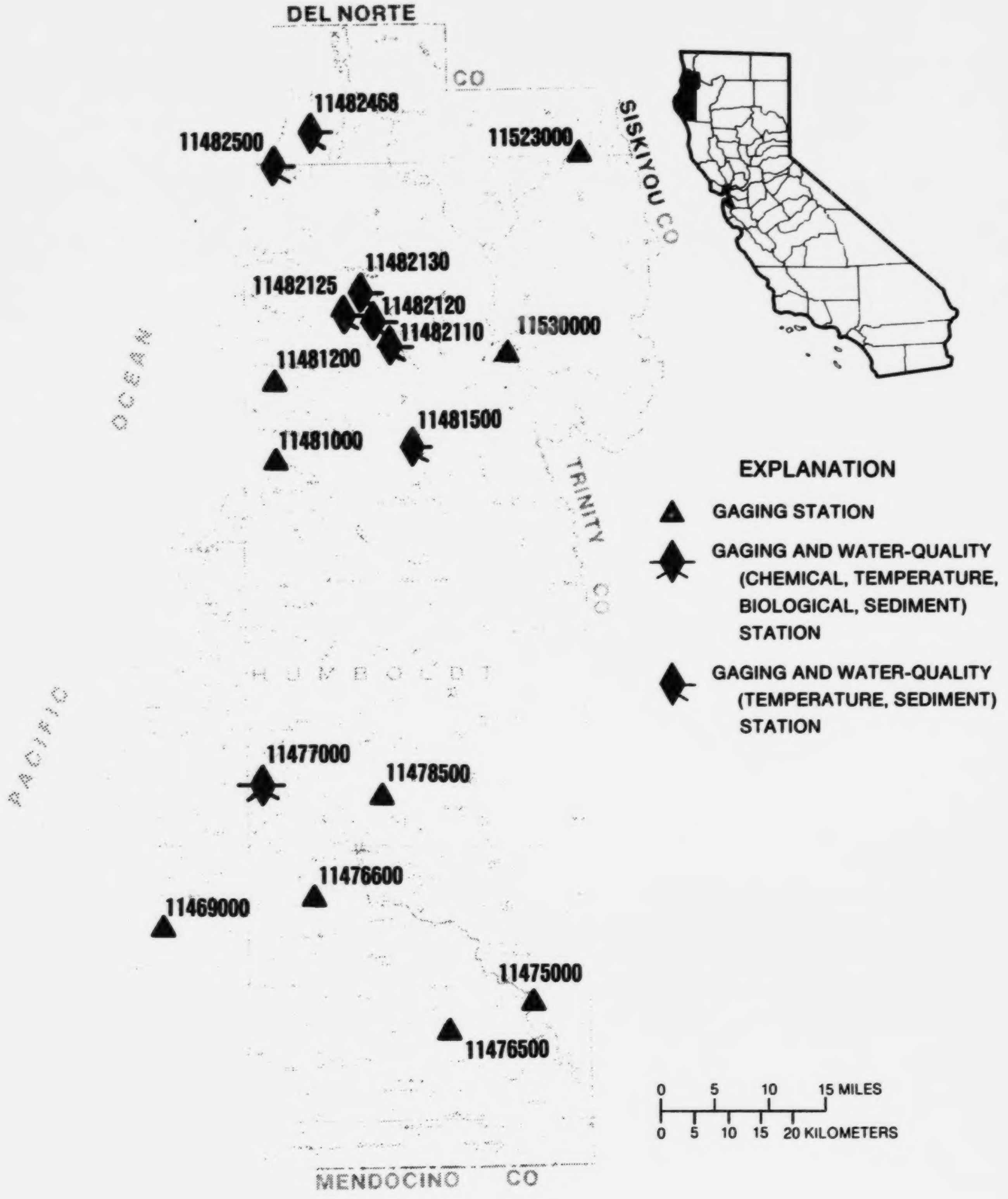

DEL NORTE
CO
SISKIYOU CO
TRINITY
CO
HUMBOLDT
MENDOCINO
CO
PACIFIC
OCEAN
11482468
11482500
11523000
11482130
11482125
11482120
11482110
11530000
11481200
11481500
11481000
11477000
11478500
11476600
11469000
11475000
11476500
EXPLANATION
▲ GAGING STATION
◆ GAGING AND WATER-QUALITY (CHEMICAL, TEMPERATURE, BIOLOGICAL, SEDIMENT) STATION
◆ GAGING AND WATER-QUALITY (TEMPERATURE, SEDIMENT) STATION
0 5 10 15 MILES
0 5 10 15 20 KILOMETERS

Figure 8.--Location of discharge and water-quality stations in Humboldt County.

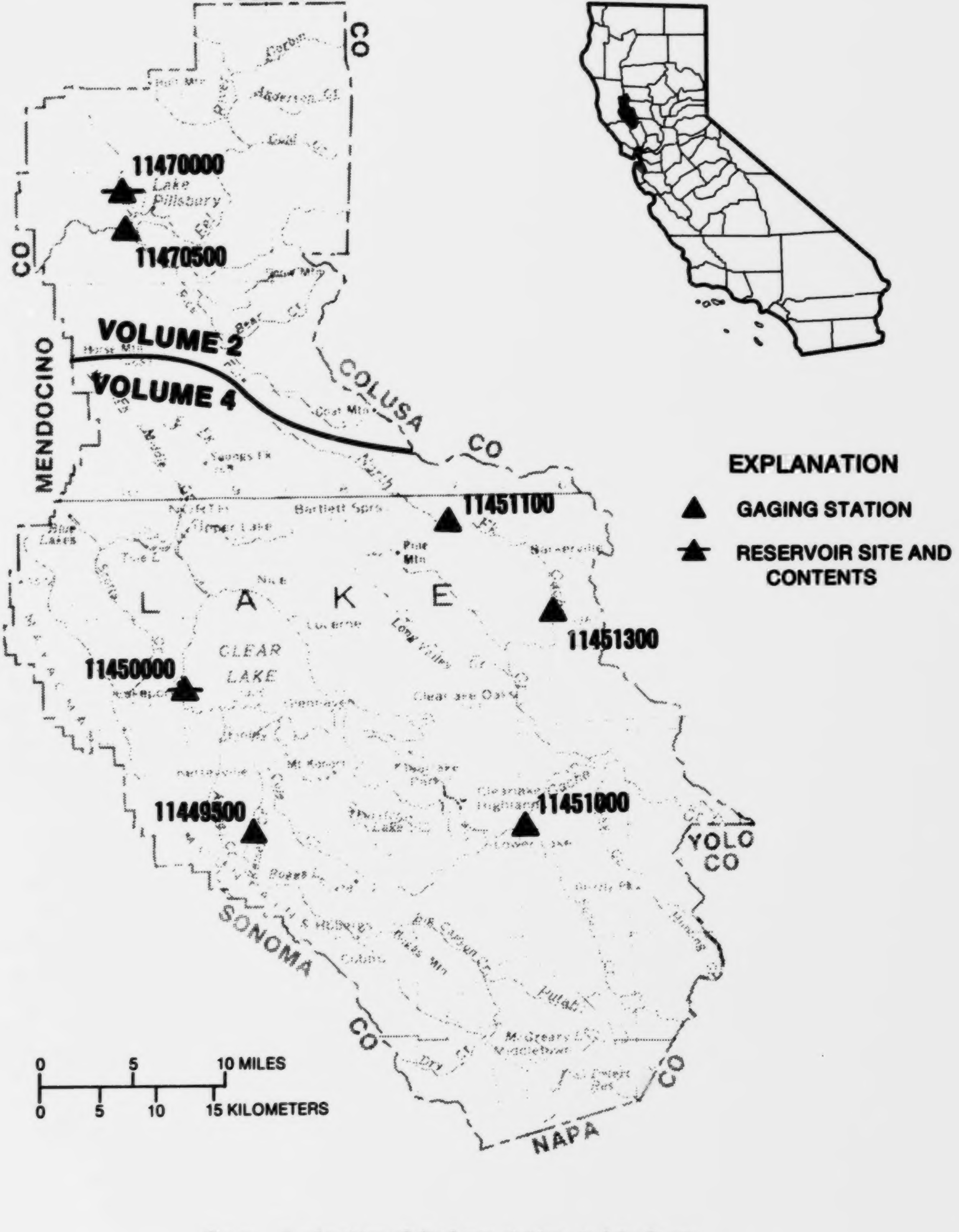

GLENN CO
11470000
Lake Pillsbury
11470500
MENDOCINO CO
VOLUME 2
VOLUME 4
COLUSA CO
11451100
L A K E
11451300
CLEAR LAKE
11450000
11449500
11451000
YOLO CO
SONOMA CO
NAPA CO
EXPLANATION
▲ GAGING STATION
RESERVOIR SITE AND CONTENTS
0 5 10 MILES
0 5 10 15 KILOMETERS

Figure 9.--Location of discharge stations in Lake County.
(Note: Records for stations 11449500 through 11451300 published in volume 4)

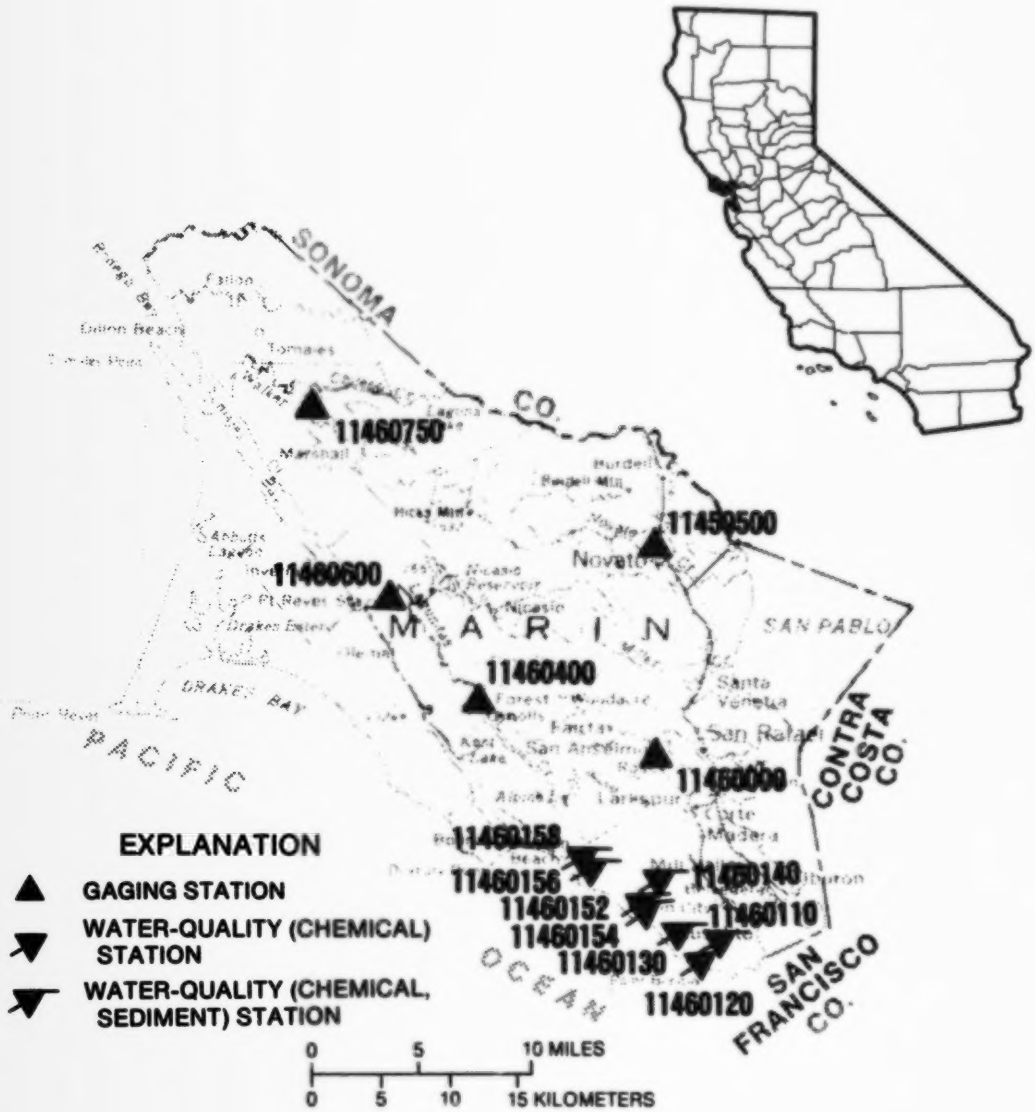

SONOMA CO.
Dillon Beach
Tomales
Marshall
11460750
Novato
11459500
11460600
Nicasio Reservoir
Nicasio
Pt. Reyes Sta.
Drakes Estero
MARIN
SAN PABLO
11460400
Forest Knolls
Woodacre
Fairfax
San Anselmo
Santa Venetia
San Rafael
11460000
Larkspur
Corte Madera
DRAKES BAY
PACIFIC OCEAN
CONTRA COSTA CO.
11460158
11460156
11460152
11460154
11460130
11460120
11460140
11460110
Tiburon
SAN FRANCISCO CO.
EXPLANATION
▲ GAGING STATION
WATER-QUALITY (CHEMICAL) STATION
WATER-QUALITY (CHEMICAL, SEDIMENT) STATION
0 5 10 MILES
0 5 10 15 KILOMETERS

Figure 10.--Location of discharge and water-quality stations in Marin County.

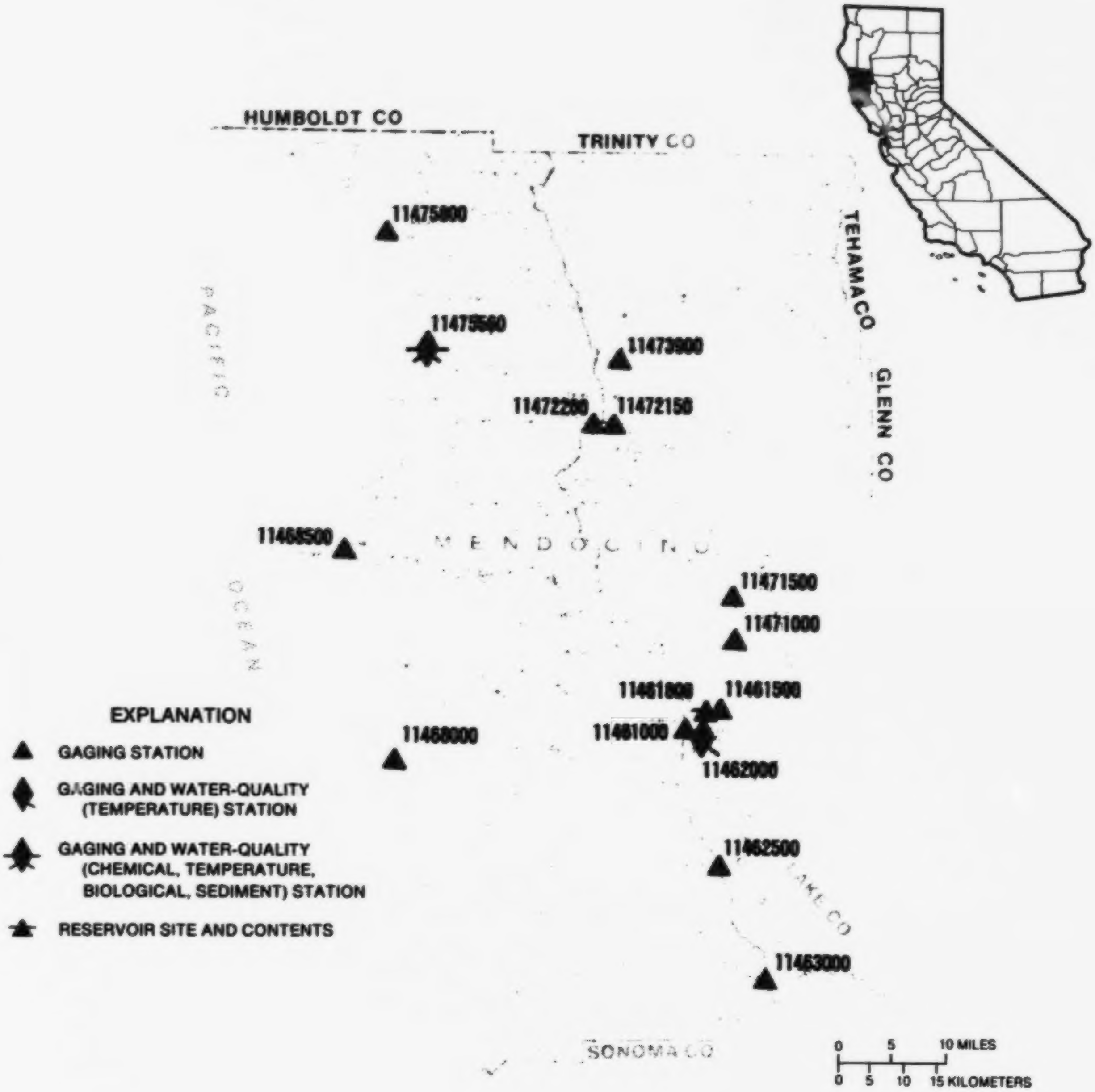

HUMBOLDT CO
TRINITY CO
TEHAMA CO
GLENN CO
LAKE CO
SONOMA CO
PACIFIC
OCEAN
MENDOCINO
11475800
11475560
11473900
11472200
11472150
11468500
11471500
11471000
11461800
11461500
11461000
11462000
11468000
11462500
11463000
EXPLANATION
GAGING STATION
GAGING AND WATER-QUALITY (TEMPERATURE) STATION
GAGING AND WATER-QUALITY (CHEMICAL, TEMPERATURE, BIOLOGICAL, SEDIMENT) STATION
RESERVOIR SITE AND CONTENTS
0 5 10 MILES
0 5 10 15 KILOMETERS

Figure 11.--Location of discharge and water-quality stations in Mendocino County.

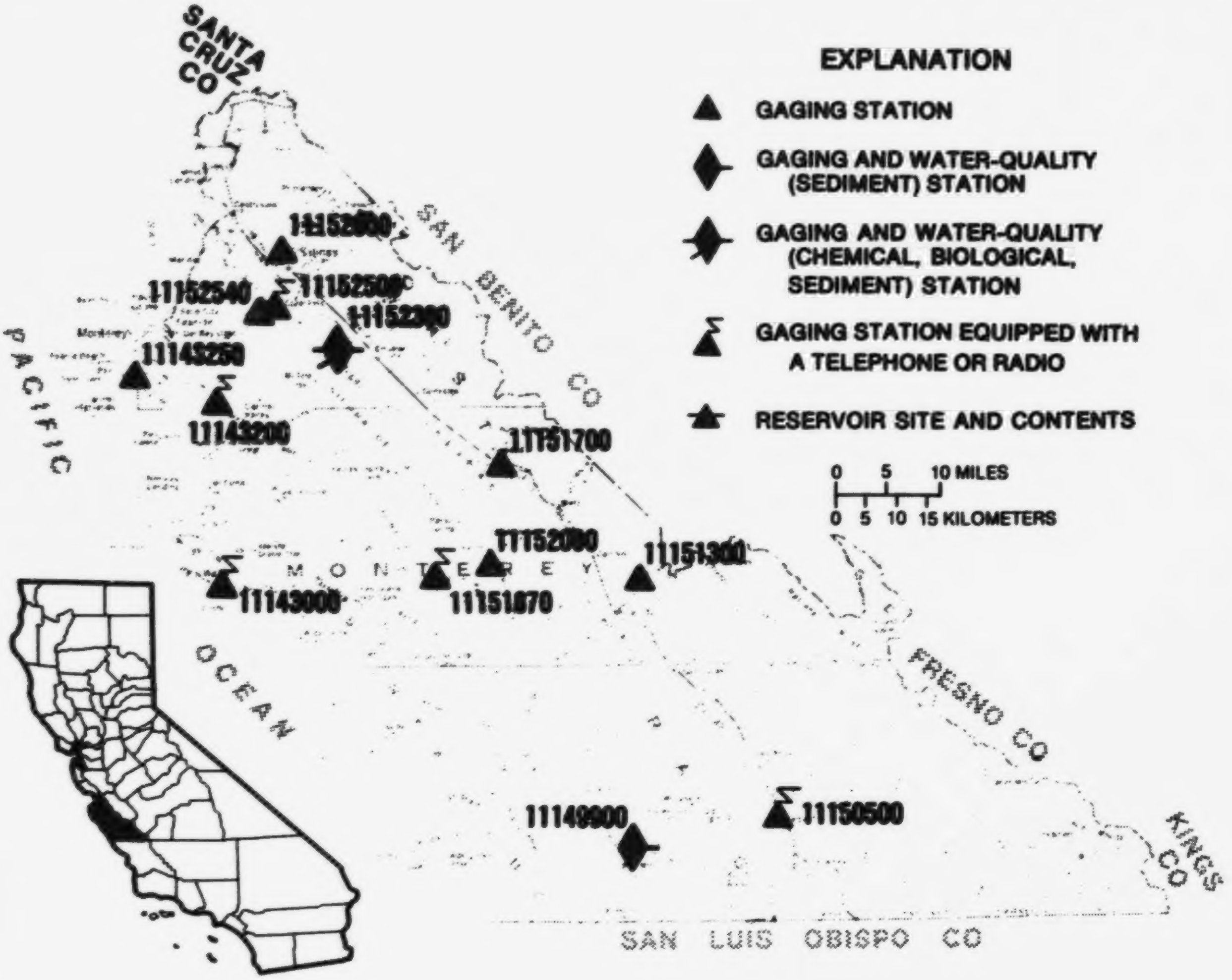

SANTA CRUZ CO
SAN BENITO CO
FRESNO CO
KINGS CO
SAN LUIS OBISPO CO
PACIFIC OCEAN
MONTEREY
11152650
11152540
11152500
11152300
11143250
11143200
11151700
11152000
11151300
11143000
11151870
11149900
11150500
EXPLANATION
GAGING STATION
GAGING AND WATER-QUALITY (SEDIMENT) STATION
GAGING AND WATER-QUALITY (CHEMICAL, BIOLOGICAL, SEDIMENT) STATION
GAGING STATION EQUIPPED WITH A TELEPHONE OR RADIO
RESERVOIR SITE AND CONTENTS
0 5 10 MILES
0 5 10 15 KILOMETERS

Figure 12.--Location of discharge and water-quality stations in Monterey County.

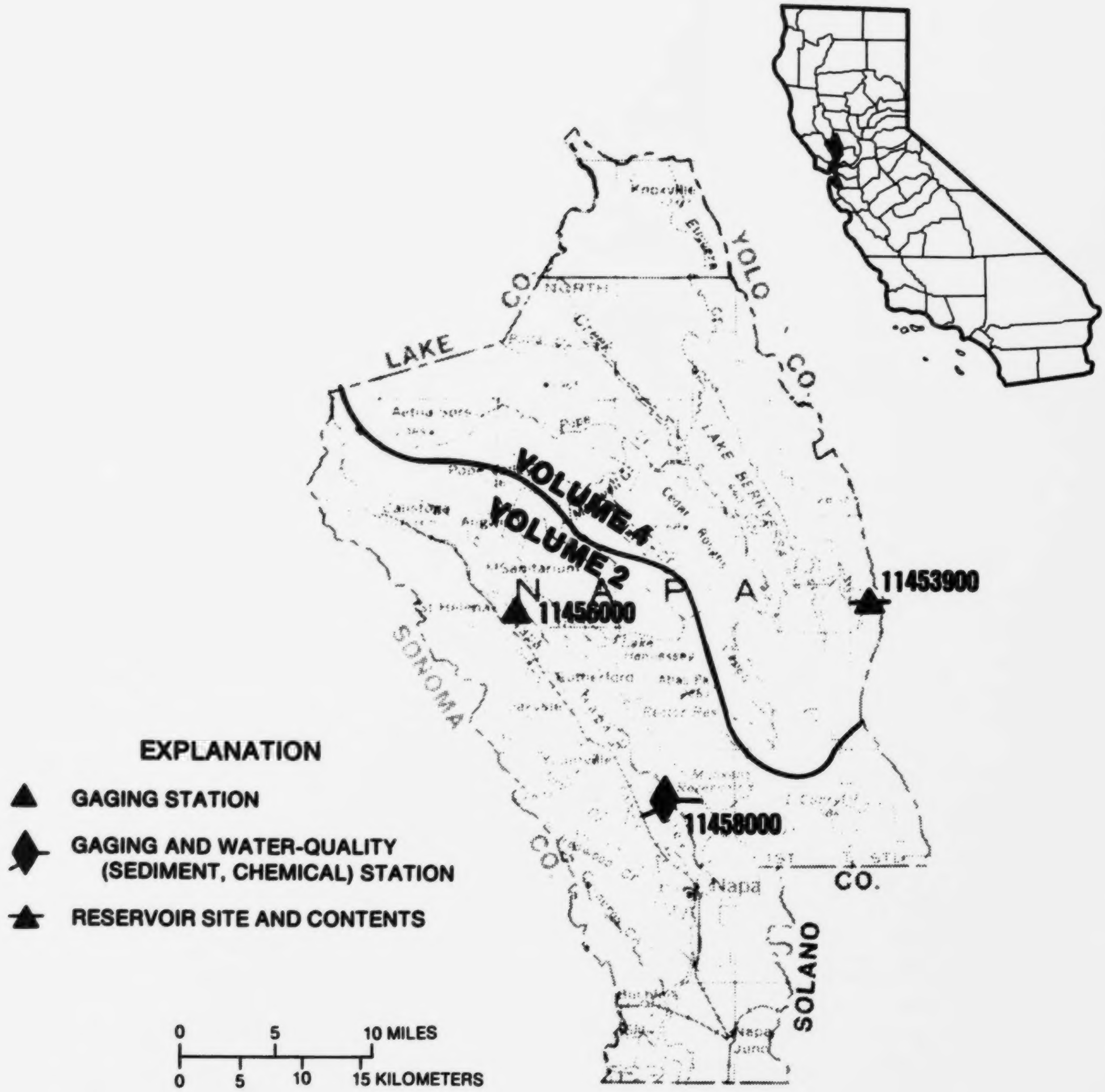

YOLO
CO.
LAKE
CO.
NORTH
LAKE BERRYESSA
VOLUME 4
VOLUME 2
N A P A
11453900
11456000
11458000
SONOMA
CO.
Napa
SOLANO
CO.
EXPLANATION
GAGING STATION
GAGING AND WATER-QUALITY (SEDIMENT, CHEMICAL) STATION
RESERVOIR SITE AND CONTENTS
0
5
10 MILES
0
5
10
15 KILOMETERS

Figure 13.--Location of discharge and water-quality stations in Napa County.
(Note: Record for station 11453900 published in volume 4)

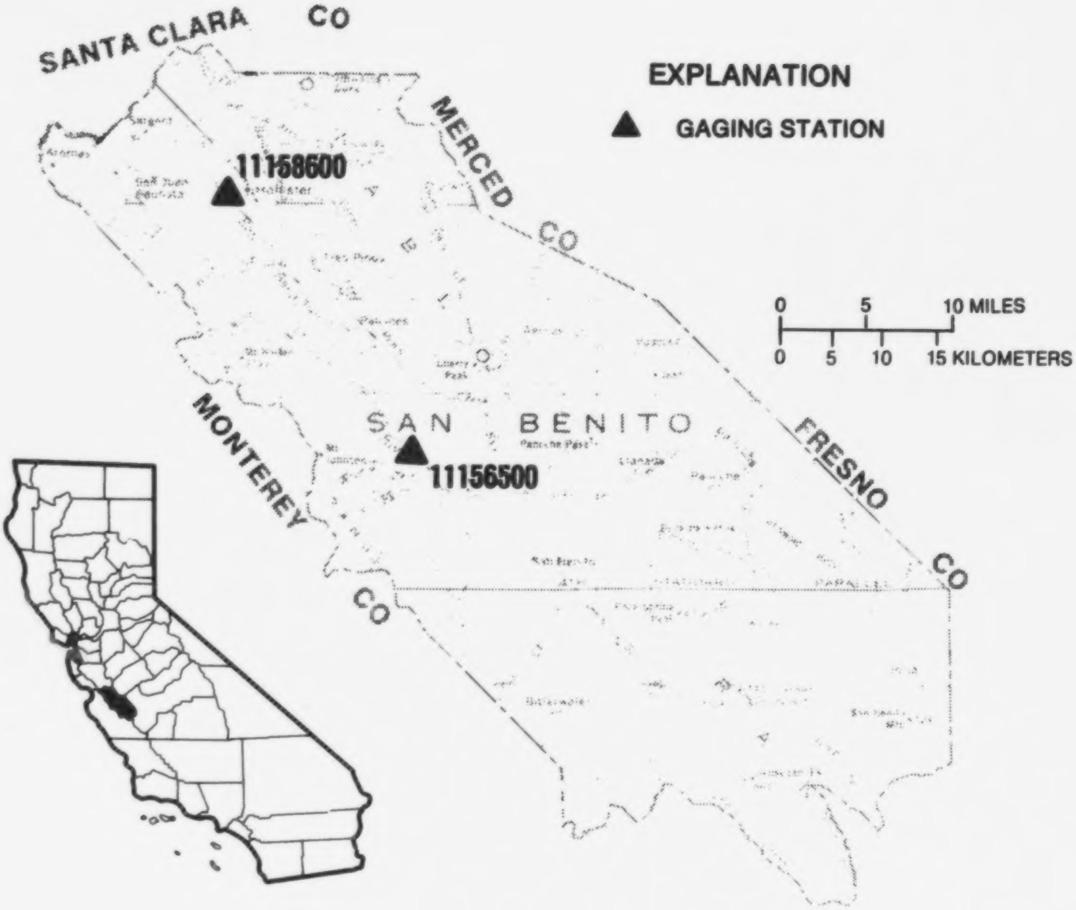
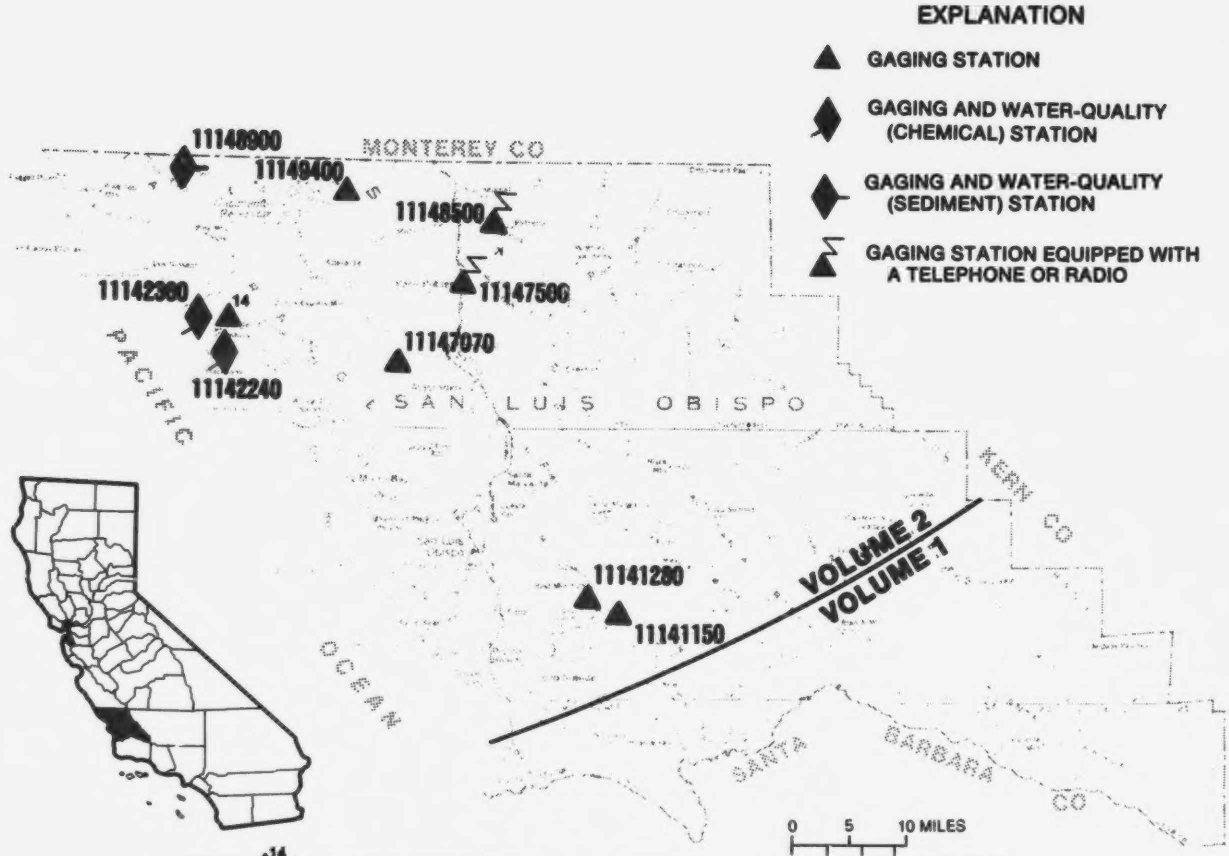
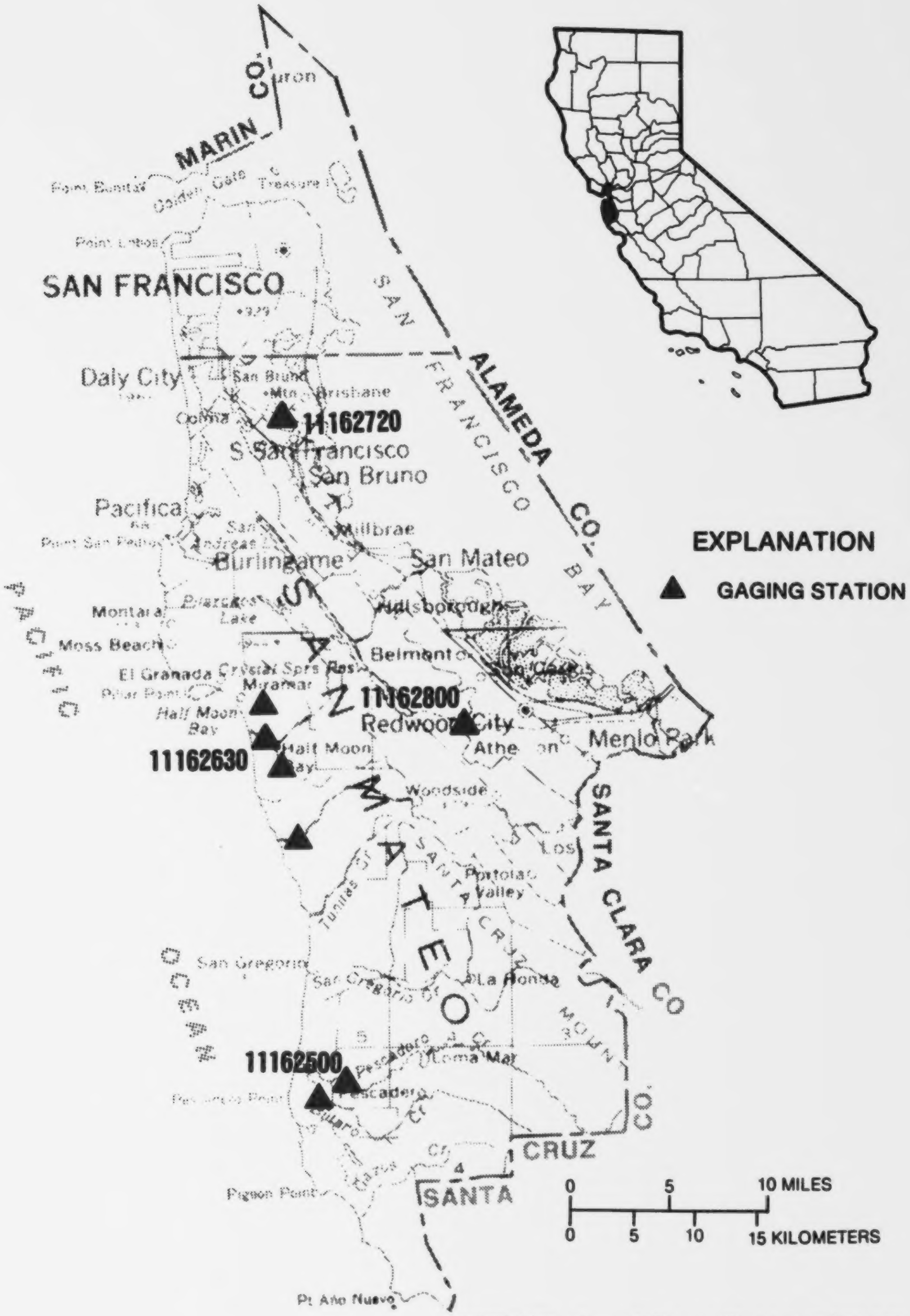

SANTA CLARA CO
MERCED CO
FRESNO CO
MONTEREY CO
SAN BENITO
11158600
11156500
EXPLANATION
▲ GAGING STATION
0 5 10 MILES
0 5 10 15 KILOMETERS

Figure 14.--Location of discharge stations in San Benito County.


EXPLANATION
GAGING STATION
GAGING AND WATER-QUALITY (CHEMICAL) STATION
GAGING AND WATER-QUALITY (SEDIMENT) STATION
GAGING STATION EQUIPPED WITH A TELEPHONE OR RADIO
MONTEREY CO
11148900
11149400
11148500
11147500
11142380
14
11142240
11147070
SAN LUIS OBISPO
PACIFIC
OCEAN
KERN CO
VOLUME 2
VOLUME 1
11141280
11141150
SANTA BARBARA CO
0 5 10 MILES
0 5 10 15 KILOMETERS

NOTE: ▲14 The fourteen stations with no number are miscellaneous measurement sites.

Figure 15.--Location of discharge and water-quality stations in San Luis Obispo County.


MARIN CO.
SAN FRANCISCO
Daly City
Pacifica
Burlingame
San Mateo
S San Francisco
San Bruno
Millbrae
Hillsborough
Belmont
Redwood City
Menlo Park
Atherton
Woodside
Portola Valley
La Honda
Loma Mar
Pescadero
San Gregorio
Half Moon Bay
Montara
Moss Beach
El Granada
Miramar
Point Bonita
Point Lobos
Point San Pedro
Pillar Point
Pigeon Point
Pt Año Nuevo
Golden Gate
Treasure I
Brisbane
Colma
San Andreas Lake
Crystal Sprs Res
PACIFIC OCEAN
SAN FRANCISCO BAY
ALAMEDA CO.
SANTA CLARA CO
SANTA CRUZ CO.
SAN MATEO
SANTA CRUZ MOUNTAINS
11162720
11162800
11162630
11162500
EXPLANATION
GAGING STATION
0 5 10 MILES
0 5 10 15 KILOMETERS

NOTE: The four stations with no number are miscellaneous measurement sites

Figure 16.--Location of discharge stations in San Mateo County.

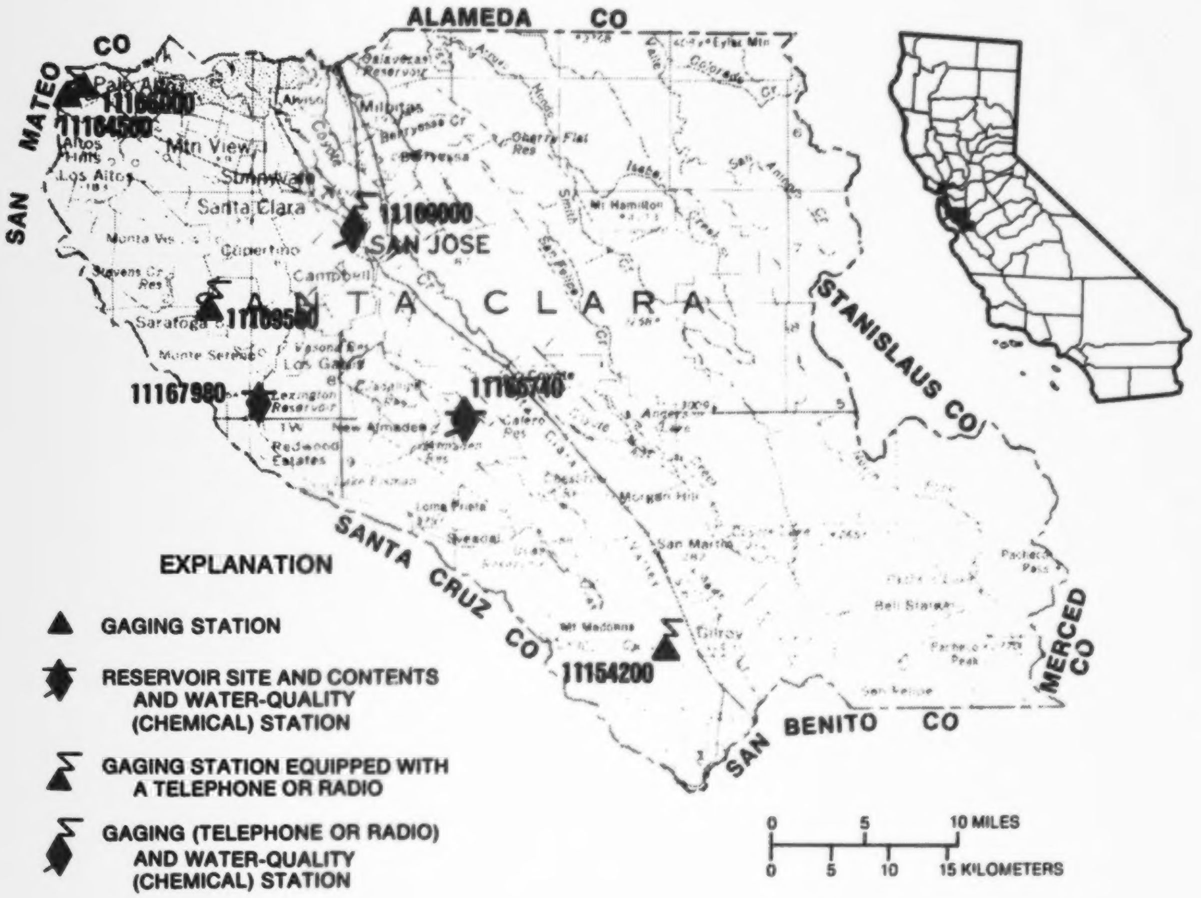

ALAMEDA CO
SAN MATEO CO
STANISLAUS CO
MERCED CO
SAN BENITO CO
SANTA CRUZ CO
SANTA CLARA
11166000
11164500
11169000
11169500
11167980
11165740
11154200
Palo Alto
Mtn View
Altos Hills
Los Altos
Sunnyvale
Santa Clara
SAN JOSE
Monta Vista
Cupertino
Campbell
Stevens Cr Res
Saratoga
Monte Sereno
Vasona Res
Los Gatos
Lexington Reservoir
Guadalupe Res
New Almaden
Almaden Res
Calero Res
Redwood Estates
Alviso
Milpitas
Berryessa Cr
Berryessa
Calaveras Reservoir
Cherry Flat Res
Coyote
Mt Hamilton
Loma Prieta
Morgan Hill
San Martin
Gilroy
Mt Madonna
Pacheco Pass
Pacheco Peak
Bell Station
San Felipe
Eylar Mtn
Smith
San Felipe
Isabel
Colorado
Arroyo Hondo
EXPLANATION
▲ GAGING STATION
RESERVOIR SITE AND CONTENTS AND WATER-QUALITY (CHEMICAL) STATION
GAGING STATION EQUIPPED WITH A TELEPHONE OR RADIO
GAGING (TELEPHONE OR RADIO) AND WATER-QUALITY (CHEMICAL) STATION
0
5
10 MILES
0
5
10
15 KILOMETERS

Figure 17.--Location of discharge and water-quality stations in Santa Clara County.

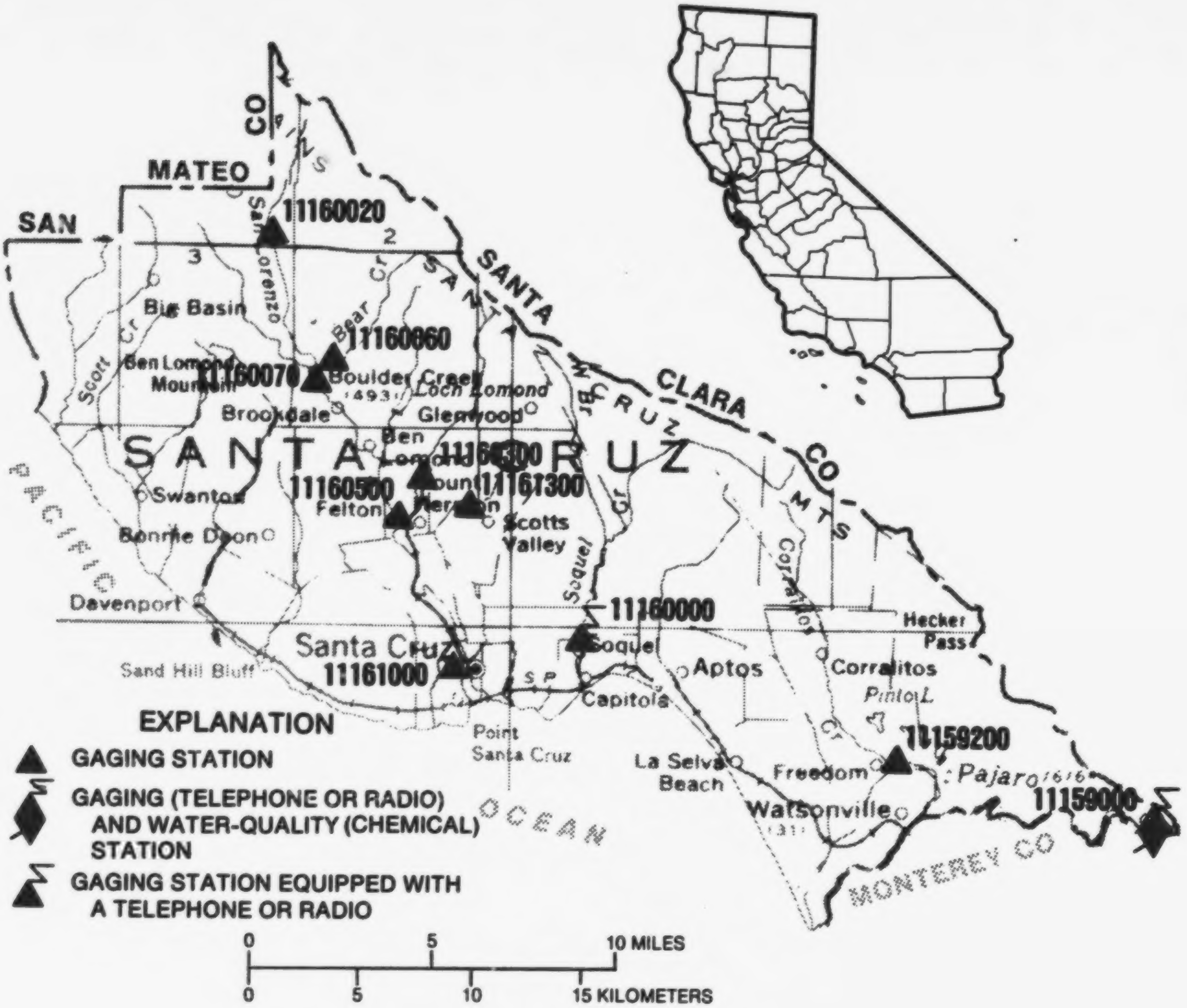

SAN
MATEO
CO
11160020
SANTA
CLARA
CO
SANTA CRUZ MTS
Big Basin
Scott Cr
San Lorenzo
Bear Cr
11160060
Ben Lomond Mountain
11160070
Boulder Creek
Loch Lomond
Brookdale
Glenwood
SANTA CRUZ
Ben Lomond
11160300
11160500
11161300
Mount Hermon
Felton
Swanton
Scotts Valley
Bonnie Doon
PACIFIC
Davenport
Soquel
11160000
Soquel
Santa Cruz
11161000
Sand Hill Bluff
SP
Capitola
Aptos
Hecker Pass
Corralitos
Pinto L
Cr
Point Santa Cruz
La Selva Beach
Freedom
11159200
Pajaro
11159000
Watsonville
OCEAN
MONTEREY CO
EXPLANATION
GAGING STATION
GAGING (TELEPHONE OR RADIO) AND WATER-QUALITY (CHEMICAL) STATION
GAGING STATION EQUIPPED WITH A TELEPHONE OR RADIO
0
5
10 MILES
0
5
10
15 KILOMETERS

Figure 18.--Location of discharge and water-quality stations in Santa Cruz County.

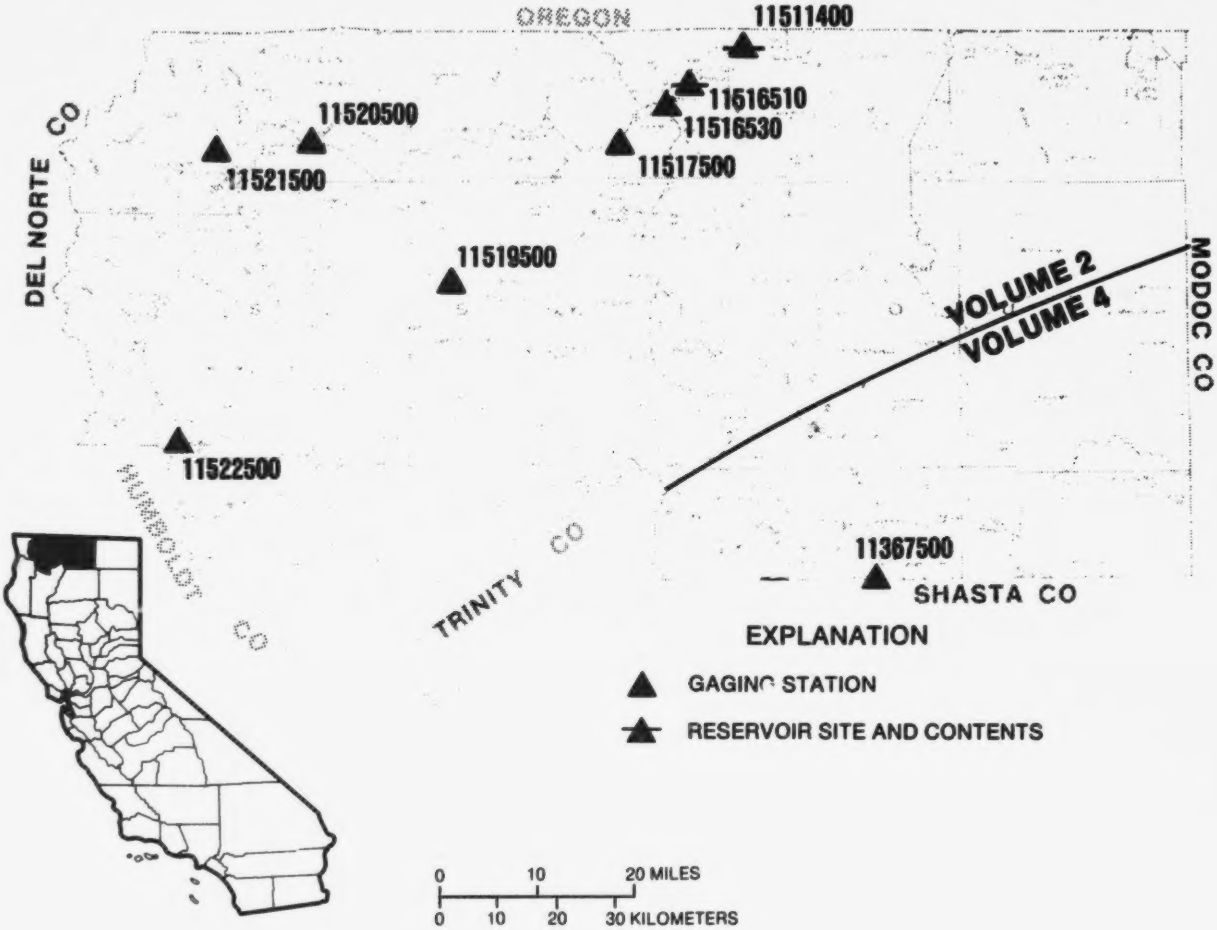

OREGON
11511400
11516510
11516530
11517500
11520500
11521500
11519500
11522500
11367500
DEL NORTE CO
MODOC CO
HUMBOLDT CO
TRINITY CO
SHASTA CO
VOLUME 2
VOLUME 4
EXPLANATION
GAGING STATION
RESERVOIR SITE AND CONTENTS
0 10 20 MILES
0 10 20 30 KILOMETERS

Figure 19.--Location of discharge stations in Siskiyou County.
(Note: Records for station 11367500 published in volume 4)

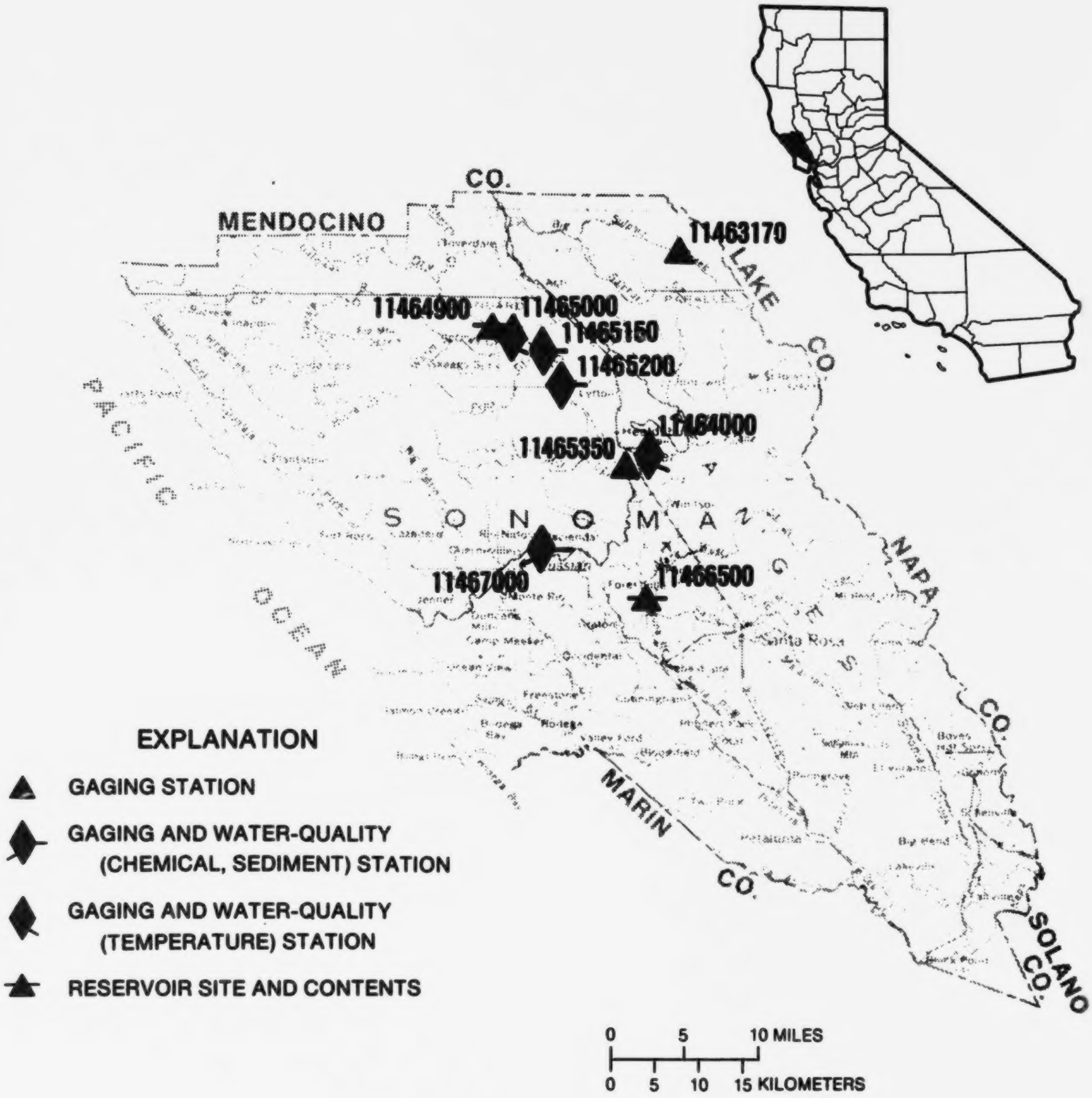

MENDOCINO CO.
LAKE CO.
NAPA CO.
SOLANO CO.
MARIN CO.
PACIFIC OCEAN
SONOMA
11463170
11464900
11465000
11465150
11465200
11464000
11465350
11467000
11466500
Santa Rosa
EXPLANATION
GAGING STATION
GAGING AND WATER-QUALITY (CHEMICAL, SEDIMENT) STATION
GAGING AND WATER-QUALITY (TEMPERATURE) STATION
RESERVOIR SITE AND CONTENTS
0 5 10 MILES
0 5 10 15 KILOMETERS

Figure 20.--Location of discharge and water-quality stations in Sonoma County.

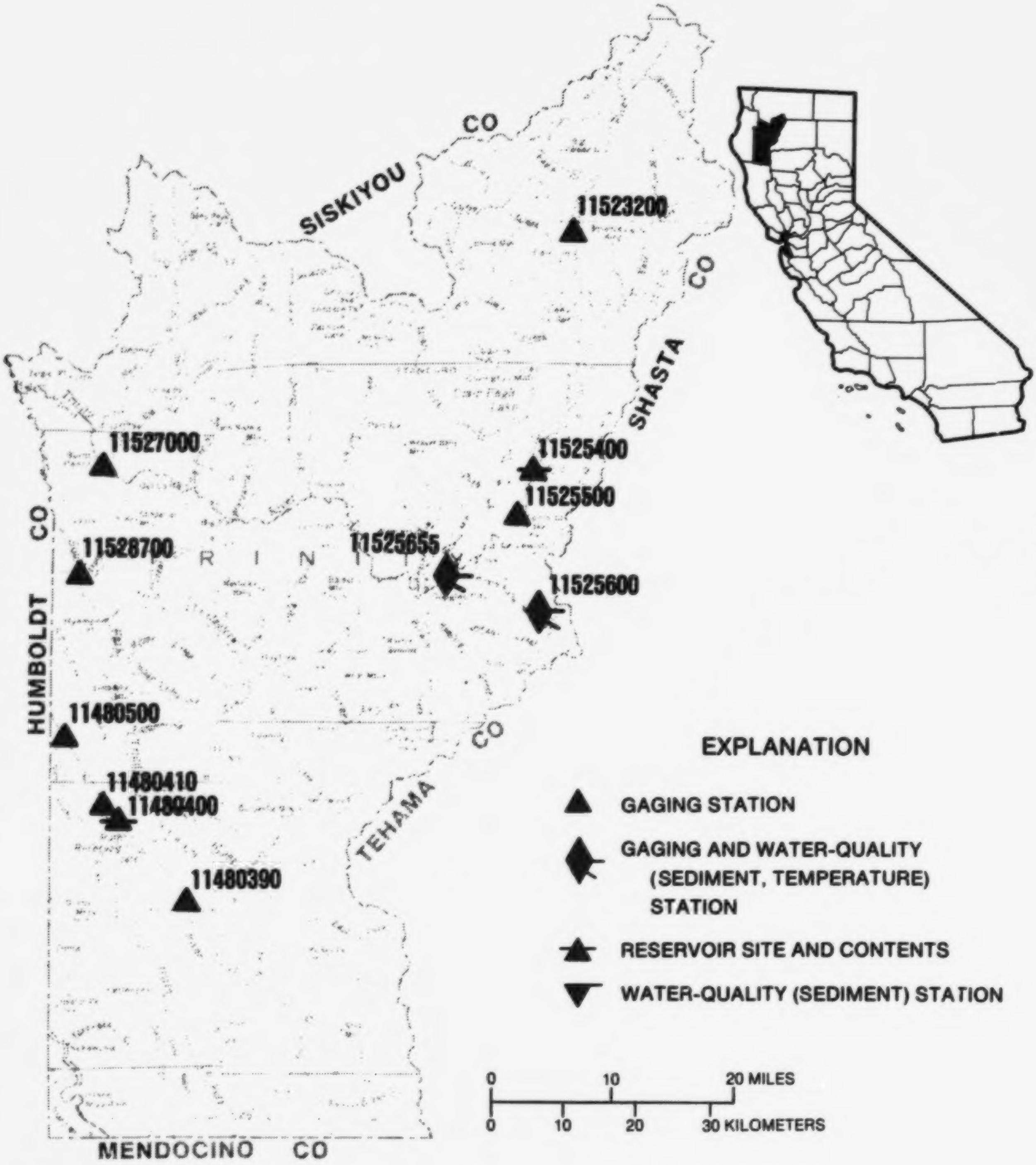

SISKIYOU CO
SHASTA CO
TEHAMA CO
HUMBOLDT CO
MENDOCINO CO
TRINITY
11523200
11527000
11525400
11525500
11528700
11525655
11525600
11480500
11480410
11480400
11480390
EXPLANATION
▲ GAGING STATION
◆ GAGING AND WATER-QUALITY (SEDIMENT, TEMPERATURE) STATION
▲ RESERVOIR SITE AND CONTENTS
▼ WATER-QUALITY (SEDIMENT) STATION
0 10 20 MILES
0 10 20 30 KILOMETERS

Figure 21.--Location of discharge and water-quality stations in Trinity County.

ARROYO GRANDE BASIN

11141150 ARROYO GRANDE ABOVE PHOENIX CREEK, NEAR ARROYO GRANDE, CA

LOCATION.--Lat 35°11'19", long 120°26'03", in Arroyo Grande Grant, San Luis Obispo County, Hydrologic Unit 18060006, on right bank 0.4 mi upstream from county road bridge, 0.45 mi upstream from Phoenix Creek, and 9.2 mi northeast of Arroyo Grande.

DRAINAGE AREA.--13.4 mi^2.

PERIOD OF RECORD.--June 1967 to current year.

REVISED RECORDS.--WDR CA-70-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 560 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to May 24, 1984, at site 0.4 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records fair except those for daily discharges greater than 5.0 ft^3/s, which are poor. No regulation or diversion upstream from station except for small stock ponds.

AVERAGE DISCHARGE.--21 years, 2.99 ft^3/s, 2,170 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,270 ft^3/s, Jan. 25, 1969, gage height, 6.83 ft, in gage well, 6.57 ft from floodmarks, site and datum then in use, from rating curve extended above 350 ft^3/s on basis of slope-area measurement of peak flow; maximum gage height, 8.29 ft, Apr. 4, 1978, site and datum then in use; minimum daily discharge, 0.12 ft^3/s, Sept. 7, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 40 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 29	0745	*45	*6.51				

Minimum daily, 0.36 ft^3/s, June 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.58	.78	1.6	1.5	1.3	1.5	.88	.65	.52	.40	.63	.44
2	.56	.79	1.6	1.4	1.3	1.2	.87	.64	.47	.42	.57	.43
3	.57	.80	1.6	1.4	1.3	1.1	.90	.65	.45	.43	.55	.40
4	.53	.99	2.8	1.6	1.2	1.1	.88	.74	.43	.46	.56	.39
5	.48	1.2	1.6	2.3	1.2	1.1	.83	.78	.44	.43	.52	.38
6	.48	1.0	1.5	1.6	1.2	1.1	.83	.81	.47	.39	.50	.38
7	.51	1.0	1.4	1.5	1.2	1.1	.85	.94	.51	.39	.49	.37
8	.54	.97	1.1	1.5	1.2	1.1	.77	.98	.47	.42	.50	.41
9	.59	.96	1.1	1.4	1.3	1.1	.78	.93	.45	.45	.52	.43
10	.61	.95	.99	1.4	1.2	1.1	.77	.89	.44	.44	.54	.43
11	.58	.95	.96	1.4	1.2	1.1	.70	.81	.43	.49	.57	.43
12	.58	1.0	1.0	1.3	1.2	1.1	.71	.70	.44	.50	.57	.44
13	.57	1.1	1.0	1.3	1.2	1.1	.75	.70	.45	.48	.56	.41
14	.58	1.1	1.0	1.3	1.2	1.1	1.6	.68	.43	.47	.54	.41
15	.58	1.0	1.0	1.3	1.1	1.1	1.1	.69	.46	.44	.51	.42
16	.59	1.1	1.5	1.3	1.1	1.1	.84	.82	.48	.44	.49	.43
17	.60	1.2	1.2	8.3	1.1	1.2	.77	.85	.44	.43	.46	.45
18	.61	1.3	1.1	2.2	1.1	1.1	.75	.74	.42	.50	.43	.43
19	.63	1.3	1.1	1.6	1.1	1.1	2.2	.63	.43	.56	.44	.42
20	.59	1.3	1.1	1.5	1.1	1.1	4.0	.57	.48	.59	.46	.44
21	.59	1.4	1.1	1.5	1.1	1.1	1.1	.55	.49	.66	.47	.46
22	.71	1.4	1.1	1.4	1.1	1.1	.82	.80	.44	.63	.45	.41
23	.78	1.4	1.1	1.4	1.1	1.1	2.9	.78	.44	.57	.43	.39
24	.72	1.4	1.0	1.4	1.1	1.1	.92	.77	.50	.61	.41	.43
25	.66	1.4	1.0	1.4	1.1	1.0	.79	.73	.51	.69	.41	.43
26	.63	1.5	1.0	1.4	1.1	1.0	.72	.72	.46	.72	.41	.42
27	.67	1.5	1.0	1.4	1.5	.95	.68	.74	.40	.69	.39	.41
28	.81	1.6	2.8	1.4	1.8	.95	.67	.65	.37	.64	.41	.41
29	.90	1.6	3.9	1.4	8.5	.97	.61	.66	.36	.60	.42	.40
30	.71	1.6	2.1	1.3	---	.96	.58	.63	.37	.61	.42	.39
31	.88	---	1.6	1.3	---	.91	---	.57	---	.62	.42	---
TOTAL	19.42	35.59	43.95	52.4	42.2	33.74	31.57	22.80	13.45	16.17	15.05	12.49
MEAN	.63	1.19	1.42	1.69	1.46	1.09	1.05	.74	.45	.52	.49	.42
MAX	.90	1.6	3.9	8.3	8.5	1.5	4.0	.98	.52	.72	.63	.46
MIN	.48	.78	.96	1.3	1.1	.91	.58	.55	.36	.39	.39	.37
AC-FT	39	71	87	104	84	67	63	45	27	32	30	25

CAL YR 1987 TOTAL 429.11 MEAN 1.18 MAX 17 MIN .35 AC-FT 851
WTR YR 1988 TOTAL 338.83 MEAN .93 MAX 8.5 MIN .36 AC-FT 672

11141280 LOPEZ CREEK NEAR ARROYO GRANDE, CA

LOCATION.--Lat 35°14'08", long 120°28'17", in SE 1/4 sec.19, T.31 S., R.14 E., San Luis Obispo County, Hydrologic Unit 18060006, on right bank 3.4 mi north of Lopez Lake spillway and 9.2 mi northeast of Arroyo Grande.

DRAINAGE AREA.--20.9 mi^2.

PERIOD OF RECORD.--July 1967 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 580 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 31, 1984, at site 0.4 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Small diversions upstream from station for domestic use.

AVERAGE DISCHARGE.--21 years, 11.0 ft^3/s, 7,970 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,830 ft^3/s, Jan. 25, 1969, gage height, 9.26 ft in gage well, 10.8 ft from floodmarks, site and datum then in use, from rating curve extended above 300 ft^3/s on basis of slope-area measurement of peak flow; maximum gage height, 9.62 ft, site and datum then in use, Mar. 1, 1983; minimum daily discharge, 0.30 ft^3/s, Aug. 1, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 29	1330	*187	*5.65				

Minimum daily, 1.7 ft^3/s, July 4, 5, 29, Aug 26, and Sept. 4, 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	3.9	3.1	6.1	4.3	25	3.3	3.9	2.4	2.2	1.9	1.9
2	2.4	3.6	3.0	5.5	4.3	13	3.2	3.7	2.4	2.2	2.0	1.9
3	2.3	3.5	3.0	4.8	4.3	9.1	3.2	3.7	2.3	2.2	2.0	1.8
4	2.5	3.7	4.1	5.0	4.3	7.5	3.3	3.6	2.3	1.7	2.0	1.7
5	2.4	5.0	4.4	21	4.3	6.6	3.2	3.7	2.5	1.7	2.0	1.7
6	2.3	3.8	8.1	13	4.3	6.1	3.1	3.7	2.5	2.0	2.0	1.8
7	2.2	3.5	7.8	7.7	4.3	5.7	3.2	3.9	2.4	2.0	2.0	1.8
8	2.2	3.5	4.8	6.3	4.2	5.4	3.2	3.6	2.4	2.0	1.9	1.9
9	2.4	3.4	4.3	4.9	4.0	5.1	3.3	3.6	2.4	2.0	2.0	2.1
10	2.5	3.2	4.0	4.8	4.0	5.0	3.2	3.4	2.3	2.0	2.1	2.1
11	2.5	3.3	3.7	4.6	4.0	4.8	3.2	3.3	2.3	2.2	2.1	2.2
12	2.6	3.4	3.7	4.5	3.9	4.6	3.2	3.2	2.3	2.2	2.1	2.3
13	2.3	3.2	3.7	4.3	4.2	4.3	3.3	3.2	2.3	2.1	2.1	2.3
14	2.2	3.2	3.5	4.2	4.0	4.3	4.0	3.1	2.2	2.1	2.1	2.3
15	2.4	3.0	3.5	3.7	4.0	4.1	3.7	3.2	2.4	2.1	2.1	2.3
16	2.4	3.0	3.8	4.4	3.9	4.1	3.6	3.2	2.3	2.0	1.9	2.3
17	2.4	3.1	3.7	48	3.8	4.3	3.4	3.2	2.3	1.8	1.9	2.3
18	2.4	3.2	3.7	31	3.9	4.0	3.5	3.0	2.4	1.8	1.9	2.1
19	2.4	3.1	3.7	13	4.0	3.6	5.4	2.7	2.4	1.9	1.9	2.1
20	2.4	3.2	3.5	9.8	3.9	3.6	9.1	2.7	2.6	1.9	2.0	2.1
21	2.5	3.4	3.6	7.9	3.9	3.5	6.6	2.6	2.5	1.8	2.0	2.3
22	3.4	3.3	3.7	7.2	3.7	3.5	5.0	2.5	2.4	1.8	2.0	2.3
23	4.2	3.3	3.7	6.5	3.7	3.4	8.0	2.6	2.4	1.9	2.0	2.2
24	3.5	3.3	3.7	6.0	3.7	3.6	6.1	2.6	2.5	1.8	1.8	2.2
25	3.1	3.3	3.8	5.7	3.7	3.4	5.2	2.6	2.5	1.8	1.8	2.4
26	3.0	3.3	3.7	5.6	3.7	3.5	4.6	2.6	2.4	1.8	1.7	2.3
27	3.2	3.3	3.7	5.0	4.3	3.4	4.4	2.5	2.2	1.8	1.8	2.1
28	3.8	3.3	7.4	4.6	5.7	3.5	4.3	2.5	2.3	1.8	1.9	1.9
29	4.6	3.3	18	4.6	57	3.5	4.2	2.7	2.3	1.7	2.0	1.9
30	3.8	3.3	16	4.6	---	3.4	4.1	2.6	2.2	1.9	1.9	1.9
31	4.1	---	8.3	4.5	---	3.4	---	2.5	---	1.9	1.9	---
TOTAL	86.8	101.9	158.7	268.8	171.3	168.3	127.1	95.9	71.1	60.1	60.8	62.5
MEAN	2.80	3.40	5.12	8.67	5.91	5.43	4.24	3.09	2.37	1.94	1.96	2.08
MAX	4.6	5.0	18	48	57	25	9.1	3.9	2.6	2.2	2.1	2.4
MIN	2.2	3.0	3.0	3.7	3.7	3.4	3.1	2.5	2.2	1.7	1.7	1.7
AC-FT	172	202	315	533	340	334	252	190	141	119	121	124

CAL YR 1987 TOTAL 1673.1 MEAN 4.58 MAX 62 MIN 2.1 AC-FT 3320
WTR YR 1988 TOTAL 1433.3 MEAN 3.92 MAX 57 MIN 1.7 AC-FT 2840

SANTA ROSA CREEK BASIN

11142240 PERRY CREEK AT CAMBRIA, CA

LOCATION.--Lat 35°33'55", long 121°04'01", in Santa Rosa Grant, San Luis Obispo County, Hydrologic Unit 18060006, on right bank, 0.3 mi upstream from mouth, 0.2 mi south of Coast Union High School, and 0.8 mi east of Cambria.

DRAINAGE AREA.--22.9 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1987 to September 1988.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 57.19 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair except those for daily discharges less than 0.10 ft^3/s, which are poor. No regulation or diversion upstream from gage.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	0845	*223	*3.91				

No flow Nov. 25-27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	.01	.37	.43	3.8	.09	.07	.03	.02	.02	.02
2	---	---	.02	.30	.41	1.5	.09	.07	.03	.02	.02	.01
3	---	---	.02	.26	.38	.88	.08	.07	.03	.02	.02	.01
4	---	---	.02	.71	.33	.70	.07	.07	.02	.02	.02	.01
5	---	---	.01	12	.31	.59	.07	.07	.02	.02	.02	.01
6	---	---	.51	1.5	.32	.54	.07	.07	.03	.02	.01	.01
7	---	---	1.9	.64	.33	.48	.07	.09	.03	.02	.01	.02
8	---	---	.13	.44	.32	.44	.06	.16	.03	.02	.01	.03
9	---	---	.05	.36	.31	.39	.07	.14	.03	.02	.01	.03
10	---	---	.02	.36	.30	.33	.05	.11	.03	.02	.01	.03
11	---	---	.01	.36	.28	.35	.05	.06	.03	.02	.01	.03
12	---	---	.01	.31	.24	.32	.05	.04	.04	.02	.01	.03
13	---	---	.01	.25	.23	.30	.05	.04	.03	.02	.01	.03
14	---	---	.01	.23	.24	.31	.10	.04	.03	.02	.01	.03
15	---	---	.02	.31	.21	.32	.07	.03	.03	.02	.01	.03
16	---	---	.04	.54	.23	.33	.06	.03	.03	.02	.01	.03
17	---	---	.04	65	.21	.29	.05	.03	.03	.02	.01	.03
18	---	---	.04	11	.20	.26	.05	.03	.03	.02	.01	.03
19	---	---	.04	4.0	.20	.23	.10	.03	.03	.02	.01	.02
20	---	---	.04	2.2	.20	.20	1.2	.03	.03	.02	.01	.02
21	---	.02	.04	1.4	.20	.19	.55	.03	.03	.02	.01	.02
22	---	.01	.04	1.0	.22	.18	.20	.03	.03	.02	.02	.03
23	---	.01	.04	.88	.24	.21	.86	.03	.03	.02	.01	.03
24	---	.01	.04	.78	.24	.21	.52	.03	.02	.02	.01	.03
25	---	.00	.05	.65	.24	.20	.21	.03	.02	.02	.01	.03
26	---	.00	.05	.60	.26	.18	.14	.03	.02	.02	.01	.03
27	---	.00	.05	.55	.46	.14	.13	.02	.02	.02	.01	.03
28	---	.01	1.6	.51	1.3	.12	.13	.03	.02	.02	.01	.02
29	---	.01	9.1	.48	18	.10	.11	.04	.02	.02	.01	.02
30	---	.01	3.4	.47	---	.10	.09	.04	.02	.02	.01	.02
31	---	---	.72	.43	---	.09	---	.03	---	.02	.02	---
TOTAL	---	---	18.08	108.89	26.84	14.28	5.44	1.62	0.82	0.62	0.38	0.72
MEAN	---	---	.58	3.51	.93	.46	.18	.052	.027	.020	.012	.024
MAX	---	---	9.1	65	18	3.8	1.2	.16	.04	.02	.02	.03
MIN	---	---	.01	.23	.20	.09	.05	.02	.02	.02	.01	.01
AC-FT	---	---	36	216	53	28	11	3.2	1.6	1.2	.8	1.4

11142240 PERRY CREEK AT CAMBRIA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: March to September 1988.
SEDIMENT DATA: March to September 1988.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
MAR								
09...	1030	0.40	931	8.10	15.0	56	58	58
APR								
22...	1015	0.22	1000	--	13.5	--	--	--
MAY								
11...	1110	0.07	1250	--	18.5	--	--	--
JUN								
22...	1620	0.03	1310	--	24.0	--	--	--
AUG								
17...	1750	0.02	1290	--	20.5	--	--	--

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	BORON, DIS-SOLVED UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)
MAR								
09...	3.1	376	52	65	0.40	7.4	150	9
APR								
22...	--	--	--	--	--	--	--	--
MAY								
11...	--	--	--	--	--	--	--	--
JUN								
22...	--	--	--	--	--	--	--	--
AUG								
17...	--	--	---	---	--	--	--	--

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
MAR					
09...	1200	0.40	15.0	15	0.02

11142300 SAN SIMEON CREEK NEAR CAMBRIA, CA

LOCATION.--Lat 35°35'59", long 121°06'47", in San Simeon Grant, San Luis Obispo County, Hydrologic Unit 18060006, on right bank, 0.7 mi upstream of Highway 1 bridge and 3.0 mi northwest of Cambria.

DRAINAGE AREA.--26.3 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1987 to September 1988.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 12.13 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1 to Nov. 24, Apr. 19-21. Records good except those for estimated daily discharges and for flows less than 1.0 ft^3/s, which are fair. No regulation or diversion upstream from gage.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	0730	*1,110	*7.72				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	9.1	6.1	37	.00	.20	.00	.00	.00	.00
2	.00	.00	.00	6.2	5.5	16	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	4.7	4.7	9.1	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	5.9	4.4	6.6	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	215	4.2	5.3	.00	.00	.00	.00	.00	.00
6	.00	.00	75	43	3.9	4.6	.00	.00	.00	.00	.00	.00
7	.00	.00	21	26	3.5	4.0	.00	.00	.00	.00	.00	.00
8	.00	.00	13	19	3.2	3.2	.00	.00	.00	.00	.00	.00
9	.00	.00	13	15	2.7	2.8	.00	.00	.00	.00	.00	.00
10	.00	.00	.34	13	2.6	2.7	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	11	2.2	2.1	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	9.4	1.8	1.6	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	7.9	1.6	1.4	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	6.9	1.4	1.3	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	6.8	1.0	1.3	.00	.00	.00	.00	.00	.00
16	.00	.00	.17	7.3	1.1	1.1	.00	.00	.00	.00	.00	.00
17	.00	.00	1.3	420	.55	.88	.00	.00	.00	.00	.00	.00
18	.00	.00	.45	113	.63	.75	.00	.00	.00	.00	.00	.00
19	.00	.00	.34	54	.44	.65	.50	.00	.00	.00	.00	.00
20	.00	.00	.21	39	.46	.48	6.8	.00	.00	.00	.00	.00
21	.00	.00	.24	32	.47	.36	4.5	.00	.00	.00	.00	.00
22	.00	.00	.30	25	.61	.35	1.6	.00	.00	.00	.00	.00
23	.00	.00	.24	20	.49	.30	6.5	.00	.00	.00	.00	.00
24	.00	.00	.18	16	.40	.24	6.6	.00	.00	.00	.00	.00
25	.00	.00	.13	12	.57	.14	3.3	.00	.00	.00	.00	.00
26	.00	.00	.04	11	.60	.0	2.3	.00	.00	.00	.00	.00
27	.00	.00	.02	9.3	1.5	.00	1.5	.00	.00	.00	.00	.00
28	.00	.00	37	8.4	6.1	.00	1.1	.00	.00	.00	.00	.00
29	.00	.00	101	7.7	65	.00	.69	.00	.00	.00	.00	.00
30	.00	.00	40	7.1	---	.00	.43	.00	.00	.00	.00	.00
31	.00	---	15	6.3	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	318.96	1187.0	127.72	104.25	35.82	0.20	0.00	0.00	0.00	0.00
MEAN	.00	.00	10.3	38.3	4.40	3.36	1.19	.006	.00	.00	.00	.00
MAX	.00	.00	101	420	65	37	6.8	.20	.00	.00	.00	.00
MIN	.00	.00	.00	4.7	.40	.00	.00	.00	.00	.00	.00	.00
AC-FT	.0	.0	633	2350	253	207	71	.4	.0	.0	.0	.0

WTR YR 1988 TOTAL 1773.95 MEAN 4.85 MAX 420 MIN .00 AC-FT 3520

11142300 SAN SIMEON CREEK NEAR CAMBRIA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: March 1988 to September 1988.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
MAR								
08...	0800	3.3	518	8.20	12.0	45	32	16
APR								
20...	1220	6.8	485	--	18.5	--	--	--

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)
MAR								
08...	1.1	229	42	14	0.20	15	180	3
APR								
20...	--	--	--	--	--	--	--	--

BIG SUR RIVER BASIN

11143000 BIG SUR RIVER NEAR BIG SUR, CA

LOCATION.--Lat 36°14'45", long 121°46'20", in SW 1/4 SW 1/4 sec.29, T.19 S., R.2 E., Monterey County, Hydrologic Unit 18060006, on right bank at downstream side of bridge, 0.4 mi upstream from Post Creek, and 2.6 mi southeast of town of Big Sur.

DRAINAGE AREA.--46.5 mi^2.

PERIOD OF RECORD.--March 1950 to current year. Prior to October 1959, published as Sur River at Big Sur.

REVISED RECORDS.--WSP 1445: 1952(P), 1953(M). WSP 1715: 1951, drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 240 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1951, nonrecording gage at site 0.9 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records good except those for summer months, which are fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--38 years, 102 ft^3/s, 73,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,700 ft^3/s, Jan. 5, 1978, gage height, 14.30 ft, from rating curve extended above 6,800 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 2.6 ft^3/s, Aug. 23, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 6	1630	*451	*5.50				

Minimum daily, 5.0 ft^3/s, July 10, 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	11	40	50	43	38	15	24	13	8.8	8.4	12
2	5.8	10	33	42	42	31	14	23	12	9.1	7.6	12
3	5.6	10	30	38	40	29	15	22	12	7.7	8.0	11
4	5.8	12	56	127	38	27	15	21	11	7.6	8.7	10
5	6.3	15	67	223	36	25	14	22	11	7.1	9.0	12
6	7.0	15	152	132	35	26	14	24	13	6.6	8.9	12
7	7.6	14	69	98	34	25	13	28	18	6.2	8.5	11
8	8.5	13	78	80	33	25	13	26	15	6.2	7.7	11
9	8.6	13	66	67	32	24	13	22	14	5.2	7.6	12
10	8.0	13	40	59	31	23	13	21	14	5.0	7.6	13
11	6.7	13	30	55	30	23	13	20	13	5.0	8.0	13
12	6.4	13	26	49	29	23	13	19	12	5.4	8.6	13
13	6.4	18	27	45	28	22	14	19	11	5.1	9.0	13
14	6.7	19	27	42	27	21	20	18	11	5.3	8.9	13
15	6.3	15	27	41	26	21	20	18	12	5.2	8.5	12
16	6.0	15	55	45	26	21	17	18	13	5.5	9.3	12
17	6.0	18	54	220	25	21	16	19	15	5.3	8.3	10
18	5.9	23	40	171	25	20	15	18	14	5.5	7.7	8.6
19	5.9	18	35	132	24	20	47	17	13	6.4	6.9	7.3
20	6.3	23	31	109	24	20	104	16	14	7.8	7.8	6.8
21	6.3	26	28	94	24	19	47	15	16	7.9	8.9	7.4
22	7.4	20	27	83	24	19	35	14	15	8.2	9.6	8.4
23	10	18	25	75	23	19	48	14	14	8.3	9.2	8.0
24	9.4	17	24	69	23	18	39	14	13	8.1	9.6	7.6
25	8.6	16	23	63	22	17	34	14	12	8.3	9.9	7.9
26	8.8	16	22	59	22	17	31	13	12	7.6	9.7	8.1
27	9.9	16	24	55	26	17	28	13	11	6.7	9.9	8.0
28	17	19	115	52	39	15	28	14	9.6	7.3	10	7.1
29	12	23	85	50	43	13	26	16	7.7	6.1	11	7.4
30	11	26	75	48	---	14	25	15	8.0	7.0	11	7.5
31	11	---	59	45	---	14	---	14	---	8.0	12	---
TOTAL	243.2	498	1490	2518	874	667	759	571	379.3	209.5	275.8	302.1
MEAN	7.85	16.6	48.1	81.2	30.1	21.5	25.3	18.4	12.6	6.76	8.90	10.1
MAX	17	26	152	223	43	38	104	28	18	9.1	12	13
MIN	5.6	10	22	38	22	13	13	13	7.7	5.0	6.9	6.8
AC-FT	482	988	2960	4990	1730	1320	1510	1130	752	416	547	599

CAL YR 1987 TOTAL 13795.1 MEAN 37.8 MAX 1410 MIN 5.6 AC-FT 27360
WTR YR 1988 TOTAL 8786.9 MEAN 24.0 MAX 223 MIN 5.0 AC-FT 17430

11143200 CARMEL RIVER AT ROBLES DEL RIO, CA

LOCATION.--Lat 36°28'28", long 121°43'40", in Los Laureles Grant, Monterey County, Hydrologic Unit 18060012, on right bank 10 ft downstream from county road bridge at Robles Del Rio, 0.2 mi downstream from Hitchcock Canyon, and 11 mi southeast of town of Carmel.
DRAINAGE AREA.--193 mi^2.

PERIOD OF RECORD.--August 1957 to current year.
REVISED RECORDS.--WSP 1715: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 270 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to June 1981, at site 150 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Aug. 5, 6. Records fair. Low flow regulated by Los Padres Reservoir 11 mi upstream, usable capacity, 2,180 acre-ft, and San Clemente Reservoir 4 mi upstream, usable capacity, 796 acre-ft. Diversion from San Clemente Reservoir for municipal supply amounted to 4,540 acre-ft for the current year.

AVERAGE DISCHARGE (unadjusted).--31 years, 92.3 ft^3/s, 66,870 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,380 ft^3/s, Feb. 28, 1983, gage height, 11.49 ft, from rating curve extended above 2,800 ft^3/s on basis of slope-area measurement at gage height 9.97 ft; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 23, 1955, reached a stage of 11.7 ft from floodmarks, discharge, 6,930 ft^3/s, from slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	1715	*412	*5.97				

Minimum daily, 0.26 ft^3/s, Aug. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.95	2.1	2.8	5.7	24	22	3.2	3.2	2.8	2.2	.91	1.7
2	.95	2.4	2.2	4.4	24	14	3.0	3.3	2.8	2.2	.56	1.7
3	.89	2.4	2.0	3.8	22	12	2.8	3.2	2.8	2.1	.41	1.5
4	.80	2.2	4.0	3.7	22	11	2.8	3.4	2.7	2.2	.34	1.4
5	.71	2.2	4.8	3.6	21	10	2.6	4.0	2.8	2.1	.26	1.2
6	.70	2.2	4.0	8.5	18	9.6	2.7	4.5	2.9	2.2	.33	1.1
7	.77	2.1	4.1	59	17	9.4	2.5	4.3	2.9	2.4	1.3	1.1
8	.93	2.0	3.7	54	16	8.9	2.1	4.2	2.8	2.2	1.8	1.2
9	1.0	2.0	4.2	46	16	8.2	2.0	3.4	2.7	2.1	2.0	1.3
10	1.1	2.0	3.2	40	15	7.6	1.9	3.0	2.8	2.1	2.1	1.3
11	1.0	1.9	3.4	34	15	7.5	1.8	3.0	2.8	2.2	2.3	1.3
12	.92	2.0	3.1	30	13	6.9	1.7	2.8	2.8	2.2	2.4	1.4
13	.89	2.5	3.4	28	12	6.6	1.7	2.8	2.7	2.3	2.5	1.3
14	.95	2.5	3.6	24	13	6.5	2.1	2.9	2.6	2.3	2.6	1.4
15	1.0	2.2	3.8	23	12	6.2	2.0	2.8	2.5	2.2	2.5	1.5
16	1.2	2.3	5.4	23	12	5.8	1.8	3.0	2.5	2.0	2.5	1.4
17	1.2	2.5	4.4	185	11	5.7	1.6	3.1	2.7	1.9	2.4	1.5
18	1.2	2.4	4.4	269	10	5.3	1.4	2.9	3.0	2.0	2.4	1.5
19	1.2	2.1	4.2	152	9.6	5.2	1.3	2.8	3.1	2.2	2.5	1.4
20	1.3	2.1	4.0	111	9.9	5.2	3.8	2.6	3.3	2.6	2.5	1.4
21	1.4	2.3	4.0	87	9.8	4.5	3.3	2.3	3.4	2.6	2.6	1.5
22	1.8	2.2	4.5	72	9.7	3.9	2.4	2.4	3.1	2.6	2.5	1.5
23	2.1	2.1	4.3	60	9.7	4.4	2.9	2.5	2.7	2.2	2.5	1.4
24	1.9	2.0	3.7	53	9.3	5.0	2.2	2.7	2.5	2.2	2.4	1.6
25	1.7	2.1	3.7	46	8.8	4.9	2.2	4.0	2.5	2.2	1.9	1.7
26	1.7	2.1	3.8	42	8.6	4.9	4.8	3.3	2.4	2.0	1.4	1.6
27	2.7	2.0	3.6	37	8.6	4.5	2.5	3.1	2.3	1.8	1.4	1.6
28	3.1	2.0	4.8	33	12	4.1	3.0	2.9	2.3	1.8	1.5	1.5
29	2.1	2.0	5.4	30	17	4.0	3.5	3.1	2.2	1.7	1.5	1.4
30	2.0	2.0	5.7	29	---	3.7	3.2	2.9	2.2	1.6	1.5	1.4
31	1.9	---	9.5	27	---	3.5	---	2.9	---	1.5	1.6	---
TOTAL	42.06	64.9	127.7	1623.7	406.0	221.0	74.8	97.3	81.6	65.9	55.41	42.8
MEAN	1.36	2.16	4.12	52.4	14.0	7.13	2.49	3.14	2.72	2.13	1.79	1.43
MAX	3.1	2.5	9.5	269	24	22	4.8	4.5	3.4	2.6	2.6	1.7
MIN	.70	1.9	2.0	3.6	8.6	3.5	1.3	2.3	2.2	1.5	.26	1.1
AC-FT	83	129	253	3220	805	438	148	193	162	131	110	85

CAL YR 1987 TOTAL 5552.29 MEAN 15.2 MAX 947 MIN .58 AC-FT 11010
WTR YR 1988 TOTAL 2903.17 MEAN 7.93 MAX 269 MIN .26 AC-FT 5760

CARMEL RIVER BASIN

11143250 CARMEL RIVER NEAR CARMEL, CA

LOCATION.--Lat 36°32'20", long 121°52'25", in Canada de la Segunda Grant, Monterey County, Hydrologic Unit 18060012, on right bank 0.3 mi downstream from Potrero Canyon and 3 mi east of Carmel.

DRAINAGE AREA.--246 mi^2.

PERIOD OF RECORD.--August 1962 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 45 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. No flow since Apr. 27, 1987. Low flow regulated by Los Padres Reservoir, usable capacity, 2,180 acre-ft, and San Clement Reservoir, usable capacity, 796 acre-ft. Diversion from San Clemente Reservoir for municipal supply amounted to 4,540 acre-ft for the current year.

AVERAGE DISCHARGE (unadjusted).--26 years, 112 ft^3/s, 81,140 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,590 ft^3/s, Feb. 28, 1983, gage height, 18.22 ft in gage well, 18.22 ft from floodmarks, from rating curve extended above 2,800 ft^3/s on basis of slope-area measurement at gage height 17.35 ft; no flow from Apr. 27, 1987 to Sept. 30, 1988.

EXTREMES FOR CURRENT YEAR.--No flow during year.

SALINAS RIVER BASIN

11147070 SANTA RITA CREEK NEAR TEMPLETON, CA

LOCATION.--Lat 35°31'26", long 120°45'54", in Asuncion Grant, San Luis Obispo County, Hydrologic Unit 18060005, on left bank 1.6 mi upstream from mouth and 4 mi west of Templeton.

DRAINAGE AREA.--18.2 mi^2

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 860 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Mar. 27 to May 17. Records fair except those for estimated daily discharges, which are poor. Some regulation by stockponds and small diversions by irrigation pumps upstream from station.

AVERAGE DISCHARGE.--27 years, 14.4 ft^3/s, 10,430 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,060 ft^3/s, Jan. 19, 1969, gage height, 11.12 ft in gage well, 11.75 ft from floodmarks, from rating curve extended above 1,300 ft^3/s on basis of slope-area measurement of peak flow; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	0945	*349	*5.03				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.03	.29	4.1	4.0	21	.55	.35	.19	.00	.00	.00
2	.00	.01	.29	3.1	3.5	9.3	.51	.33	.15	.00	.00	.00
3	.00	.0	.29	2.7	3.3	6.7	.48	.31	.13	.00	.00	.00
4	.00	.04	.62	2.7	3.0	5.5	.45	.30	.10	.00	.00	.00
5	.00	2.1	2.8	88	3.0	4.8	.42	.50	.08	.00	.00	.00
6	.00	.95	17	23	3.0	4.2	.40	.36	.07	.00	.00	.00
7	.00	.44	11	11	3.0	4.0	.38	.27	.07	.00	.00	.00
8	.00	.27	2.7	7.8	2.9	3.7	.37	.25	.07	.00	.00	.00
9	.00	.23	3.6	6.1	2.7	3.1	.36	.23	.07	.00	.00	.00
10	.00	.19	2.1	5.1	2.7	2.8	.35	.21	.07	.00	.00	.00
11	.00	.18	1.6	4.5	2.7	2.6	.34	.20	.07	.00	.00	.00
12	.00	.17	1.3	3.8	2.5	2.3	.33	.19	.07	.00	.00	.00
13	.00	.15	1.1	3.4	2.4	2.2	.33	.18	.07	.00	.00	.00
14	.00	.15	.91	3.2	2.4	2.2	.90	.17	.06	.00	.00	.00
15	.00	.18	.82	3.2	2.3	2.2	.50	.16	.05	.00	.00	.00
16	.00	.18	1.5	4.2	2.3	2.0	.37	.16	.05	.00	.00	.00
17	.00	.20	1.8	182	2.0	1.9	.34	.15	.04	.00	.00	.00
18	.00	.19	1.3	61	2.0	2.0	.32	.15	.04	.00	.00	.00
19	.00	.18	1.2	26	2.0	2.0	1.0	.16	.03	.00	.00	.00
20	.00	.20	1.0	16	2.0	2.0	2.7	.15	.03	.00	.00	.00
21	.00	.18	1.0	12	2.0	1.9	3.5	.15	.03	.00	.00	.00
22	.00	.18	1.0	9.8	2.0	1.9	2.0	.18	.02	.00	.00	.00
23	.00	.18	1.0	8.3	2.0	1.7	4.5	.23	.02	.00	.00	.00
24	.00	.18	.99	7.3	2.0	1.7	1.7	.18	.01	.00	.00	.00
25	7.2	.20	.98	6.3	2.0	5.1	1.0	.21	.01	.00	.00	.00
26	7.6	.18	.80	5.7	2.0	1.7	.70	.23	.00	.00	.00	.00
27	.61	.18	.77	5.3	2.5	1.1	.54	.23	.00	.00	.00	.00
28	.34	.18	5.3	4.9	5.0	.92	.46	.14	.00	.00	.00	.00
29	.13	.21	45	4.5	26	.78	.42	.17	.00	.00	.00	.00
30	.06	.24	19	4.1	---	.68	.38	.22	.00	.00	.00	.00
31	.04	---	6.9	4.0	---	.60	---	.23	---	.00	.00	---
TOTAL	15.98	7.95	135.96	533.1	99.2	104.58	26.60	6.95	1.60	0.00	0.00	0.00
MEAN	.52	.26	4.39	17.2	3.42	3.37	.89	.22	.053	.00	.00	.00
MAX	7.6	2.1	45	182	26	21	4.5	.50	.19	.00	.00	.00
MIN	.00	.00	.29	2.7	2.0	.60	.32	.14	.00	.00	.00	.00
AC-FT	32	16	270	1060	197	207	53	14	3.2	.0	.0	.0

CAL YR 1987 TOTAL 1118.28 MEAN 3.06 MAX 251 MIN .00 AC-FT 2220
WTR YR 1988 TOTAL 931.92 MEAN 2.55 MAX 182 MIN .00 AC-FT 1850

SALINAS RIVER BASIN

11147500 SALINAS RIVER AT PASO ROBLES, CA

LOCATION.--Lat 35°37'43", long 120°41'00", in Paso de Robles Grant, San Luis Obispo County, Hydrologic Unit 18060005, on left bank at upstream side of 13th Street Bridge in Paso Robles and 3.5 mi upstream from Huerhuero Creek.

DRAINAGE AREA.--390 mi^2.

PERIOD OF RECORD.--October 1939 to September 1965, October 1969 to current year.

REVISED RECORDS.--WSP 981: 1942.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 670.61 ft above National Geodetic Vertical Datum of 1929. Prior to June 14, 1951, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records fair. Low flows regulated by Santa Margarita Lake 32 mi upstream beginning in December 1941, usable capacity, 23,000 acre-ft. Diversion from Santa Margarita Lake for San Luis Obispo municipal supply amounted to 4,240 acre-ft for the current year. Small diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--45 years, 96.7 ft^3/s, 70,060 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,500 ft^3/s, Feb. 16, 1980, gage height, 15.99 ft, from rating curve extended above 11,000 ft^3/s; maximum gage height, 17.24 ft, Apr. 3, 1958; no flow for many days in each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 25, 1969, reached a stage of 23.8 ft from floodmarks, discharge, 28,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	1745	*966	*6.98				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	12	486	1.5	2.8	.00	.00	.00	.00
2	.00	.00	.00	.00	11	242	1.3	1.9	.00	.00	.00	.00
3	.00	.00	.00	.00	8.4	159	1.2	1.3	.00	.00	.00	.00
4	.00	.00	.00	.00	7.2	124	.94	.70	.00	.00	.00	.00
5	.00	.00	.00	.00	6.9	97	.82	.73	.00	.00	.00	.00
6	.00	.00	.00	.00	6.2	86	.82	.65	.00	.00	.00	.00
7	.00	.00	.00	5.9	6.3	86	.82	.47	.00	.00	.00	.00
8	.00	.00	.00	6.7	5.8	61	.71	.51	.00	.00	.00	.00
9	.00	.00	.00	2.5	4.9	50	.67	.29	.00	.00	.00	.00
10	.00	.00	.00	.02	4.7	43	.51	.07	.00	.00	.00	.00
11	.00	.00	.00	.00	4.6	42	.96	.02	.00	.00	.00	.00
12	.00	.00	.00	.00	4.4	36	.40	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	4.1	30	.10	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	4.0	26	2.2	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	3.6	25	.34	.00	.00	.00	.00	.00
16	.00	.00	.00	2.4	3.4	21	.09	.00	.00	.00	.00	.00
17	.00	.00	.00	346	3.1	17	.02	.00	.00	.00	.00	.00
18	.00	.00	.00	376	3.1	15	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	167	2.6	14	4.5	.00	.00	.00	.00	.00
20	.00	.00	.00	107	2.5	13	12	.00	.00	.00	.00	.00
21	.00	.00	.00	71	2.8	14	16	.00	.00	.00	.00	.00
22	.00	.00	.00	54	3.3	13	11	.00	.00	.00	.00	.00
23	.00	.00	.00	53	3.0	12	16	.00	.00	.00	.00	.00
24	.00	.00	.00	47	2.8	10	10	.00	.00	.00	.00	.00
25	.00	.00	.00	38	3.0	8.9	13	.00	.00	.00	.00	.00
26	.00	.00	.00	32	3.1	7.5	12	.00	.00	.00	.00	.00
27	.00	.00	.00	25	6.0	7.7	9.8	.00	.00	.00	.00	.00
28	.00	.00	.00	20	8.4	6.1	7.7	.00	.00	.00	.00	.00
29	.00	.00	.00	17	147	3.4	6.4	.00	.00	.00	.00	.00
30	.00	.00	.00	15	---	2.7	4.1	.00	.00	.00	.00	.00
31	.00	---	.00	14	---	1.8	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	1399.52	288.2	1760.1	135.90	9.44	0.00	0.00	0.00	0.00
MEAN	.00	.00	.00	45.1	9.94	56.8	4.53	.30	.00	.00	.00	.00
MAX	.00	.00	.00	376	147	486	16	2.8	.00	.00	.00	.00
MIN	.00	.00	.00	.00	2.5	1.8	.00	.00	.00	.00	.00	.00
AC-FT	.0	.0	.0	2780	572	3490	270	19	.0	.0	.0	.0

CAL YR 1987 TOTAL 2009.30 MEAN 5.50 MAX 356 MIN .00 AC-FT 3990
WTR YR 1988 TOTAL 3593.16 MEAN 9.82 MAX 486 MIN .00 AC-FT 7130

11148500 ESTRELLA RIVER NEAR ESTRELLA, CA

LOCATION.--Lat 35°43'02", long 120°38'21", in NW 1/4 NW 1/4 sec.36, T.25 S., R.12 E., San Luis Obispo County, Hydrologic Unit 18060004, on right bank 0.2 mi downstream from mouth of Ranchito Canyon and 1.9 mi northwest of Estrella.

DRAINAGE AREA.--922 mi^2, not including Carrizo Plains.

PERIOD OF RECORD.--October 1954 to current year. Prior to October 1960, published as Estrella Creek near Estrella.

REVISED RECORDS.--WSP 2129: Drainage area.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 671.59 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Estimated daily discharges: Feb. 29 to Mar. 17 and Apr. 20-27. Records fair except those for estimated daily discharges, which are poor. No regulation; pumpage from wells along river for irrigation upstream from station.

AVERAGE DISCHARGE.--34 years, 25.9 ft^3/s, 18,760 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,500 ft^3/s, Feb. 24, 1969, gage height, 10.4 ft, from floodmarks, by slope-area measurement of peak flow; maximum gage height, 10.9 ft, Jan. 25, 1969, from floodmarks; no flow for several months each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 29	2200	*129	*2.05				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	49	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	10	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	8.2	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	5.0	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	3.6	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	4.5	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	2.2	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	2.2	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	1.9	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	1.9	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.02	3.2	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.23	1.9	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.72	3.2	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.57	3.8	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	1.3	2.2	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	1.3	2.2	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.68	1.9	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	1.3	1.6	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.83	1.5	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	1.1	1.5	2.6	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	1.2	1.5	3.2	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	1.3	1.2	2.7	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	1.5	.99	5.0	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	1.5	.81	3.2	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	1.5	.89	2.2	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	1.5	.99	1.9	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	2.1	1.2	1.4	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	3.3	.69	.14	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	57	.66	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.25	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	78.95	120.68	22.34	0.00	0.00	0.00	0.00	0.00
MEAN	.00	.00	.00	.00	2.72	3.89	.74	.00	.00	.00	.00	.00
MAX	.00	.00	.00	.00	57	49	5.0	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.0	.0	.0	.0	157	239	44	.0	.0	.0	.0	.0

CAL YR 1987 TOTAL 114.59 MEAN .31 MAX 26 MIN .00 AC-FT 227
WTR YR 1988 TOTAL 221.97 MEAN .61 MAX 57 MIN .00 AC-FT 440

11148900 NACIMIENTO RIVER BELOW SAPAQUE CREEK, NEAR BRYSON, CA

LOCATION.--Lat 35°47'19", long 121°05'34", in SW 1/4 NE 1/4 sec.3, T.25 S., R.8 E., San Luis Obispo County, Hydrologic Unit 18060005, on left bank just downstream from Sapaque Creek and 1.4 mi south of Bryson.

DRAINAGE AREA.--162 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1971 to current year.

REVISED RECORDS.--WDR CA-82-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 800 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. No storage or diversion upstream from station.

AVERAGE DISCHARGE.--17 years, 200 ft^3/s, 144,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 57,000 ft^3/s, Jan. 16, 1978, gage height, 32.00 ft, from rating curve extended above 7,900 ft^3/s on basis of slope-area measurement of peak flow; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	0945	*2,850	*13.43				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.01	.14	147	57	195	11	16	3.8	.52	.00	.00
2	.00	.01	.13	114	54	97	10	15	3.5	.49	.00	.00
3	.00	.01	.13	99	51	70	9.9	15	3.2	.34	.00	.00
4	.00	.06	.45	208	48	57	9.5	13	2.9	.29	.00	.00
5	.00	.32	.22	1210	45	50	9.0	12	2.6	.20	.00	.00
6	.00	.12	311	385	43	44	8.8	13	2.5	.11	.00	.00
7	.00	.10	220	224	42	40	8.3	15	2.7	.00	.00	.00
8	.00	.10	90	160	40	37	7.7	16	2.8	.00	.00	.00
9	.00	.08	157	126	38	33	7.6	15	2.8	.00	.00	.00
10	.00	.08	80	107	37	30	6.9	14	2.7	.00	.00	.00
11	.00	.08	55	94	35	29	6.6	13	2.7	.00	.00	.00
12	.00	.08	41	83	33	27	6.2	11	2.4	.00	.00	.00
13	.00	.09	33	74	32	26	6.1	9.5	2.3	.00	.00	.00
14	.00	.09	27	67	31	25	8.5	8.9	2.1	.00	.00	.00
15	.00	.08	25	64	30	24	10	8.7	1.8	.00	.00	.00
16	.00	.09	121	66	29	23	11	7.8	1.8	.00	.00	.00
17	.00	.11	280	1430	27	22	10	7.7	1.6	.00	.00	.00
18	.00	.12	114	744	26	21	9.1	8.1	1.6	.00	.00	.00
19	.00	.11	67	343	25	21	13	7.7	1.6	.00	.00	.00
20	.00	.10	60	224	25	20	108	7.2	1.5	.00	.00	.00
21	.00	.12	49	171	24	19	71	6.4	1.6	.00	.00	.00
22	.00	.11	42	141	24	18	39	5.7	1.7	.00	.00	.00
23	.00	.11	37	121	24	17	65	5.3	1.6	.00	.00	.00
24	.00	.11	33	107	22	16	69	4.8	1.4	.00	.00	.00
25	.00	.10	30	96	22	16	46	4.4	1.4	.00	.00	.00
26	.00	.10	27	88	22	14	34	4.0	1.4	.00	.00	.00
27	.00	.12	26	82	26	14	26	3.9	1.2	.00	.00	.00
28	.00	.13	242	75	60	12	22	3.8	.97	.00	.00	.00
29	.00	.13	351	69	229	12	20	3.7	.74	.00	.00	.00
30	.00	.12	340	65	---	12	18	3.7	.65	.00	.00	.00
31	.00	---	219	60	---	11	---	3.6	---	.00	.00	---
TOTAL	0.00	2.99	3078.07	7044	1201	1052	687.2	282.9	61.56	1.95	0.00	0.00
MEAN	.00	.10	99.3	227	41.4	33.9	22.9	9.13	2.05	.063	.00	.00
MAX	.00	.32	351	1430	229	195	108	16	3.8	.52	.00	.00
MIN	.00	.01	.13	60	22	11	6.1	3.6	.65	.00	.00	.00
AC-FT	.0	5.9	6110	13970	2380	2090	1360	561	122	3.9	.0	.0

CAL YR 1987 TOTAL 15413.59 MEAN 42.2 MAX 3770 MIN .00 AC-FT 30570
WTR YR 1988 TOTAL 13411.67 MEAN 36.6 MAX 1430 MIN .00 AC-FT 26600

11148900 NACIMIENTO RIVER BELOW SAPAQUE CREEK, NEAR BRYSON, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972 to current year. Published as station 11148800 "near Bryson" in water years 1958-59, 1961-71.
WATER TEMPERATURE: Water years 1972-73.
SEDIMENT DATA: Water years 1972 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1971 to September 1973.
SUSPENDED-SEDIMENT DISCHARGE: October 1971 to September 1973.

REMARKS.--Zero bedload discharge observed for flows less than 170 ft^3/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
NOV					
05...	1330	0.37	17.0	17	0.02
DEC					
18...	1330	110	8.0	2	0.59
JAN					
21...	1420	170	7.5	0	0.00
MAR					
03...	1250	71	13.0	1	0.19
APR					
27...	1530	25	19.5	2	0.14
JUN					
09...	1600	2.9	24.5	2	0.02

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	TEMPER-ATURE WATER (DEG C)	NUMBER OF SAM-PLING POINTS (COUNT)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM
DEC							
18...	1344	8.0	1	110	--	1	1
18...	1346	8.0	1	110	--	2	21
18...	1348	8.0	1	110	1	4	10
18...	1350	8.0	1	110	1	6	14
18...	1352	8.0	1	110	1	14	36
18...	1354	8.0	1	110	3	22	66
18...	1356	8.0	1	110	5	50	96
APR							
27...	1410	19.5	1	25	--	1	1
27...	1413	19.5	1	25	1	2	5
27...	1416	19.5	1	25	1	8	56
27...	1419	19.5	1	25	1	10	25
27...	1422	19.5	1	25	1	28	80
27...	1425	19.5	1	25	1	28	76
27...	1428	19.5	1	25	3	50	91

11148900 NACIMIENTO RIVER BELOW SAPAQUE CREEK, NEAR BRYSON, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
DEC						
18...	2	4	11	30	64	100
18...	32	34	36	47	100	--
18...	14	20	32	64	100	--
18...	23	41	71	96	100	--
18...	52	59	68	88	100	--
18...	89	95	97	100	--	--
18...	100	--	--	--	--	--
APR						
27...	1	3	9	32	65	100
27...	11	19	28	43	80	100
27...	78	84	91	97	100	--
27...	29	35	45	64	100	--
27...	93	97	99	100	--	--
27...	93	98	100	--	--	--
27...	98	99	100	--	--	--

11149400 NACIMIENTO RIVER BELOW NACIMIENTO DAM, NEAR BRADLEY, CA

LOCATION.--Lat 35°45'41", long 120°51'16", in NE 1/4 NE 1/4 sec.14, T.25 S., R.10 E., San Luis Obispo County, Hydrologic Unit 18060005, Camp Roberts Military Reservation, on left bank 2.2 mi downstream from Nacimiento Dam, and 7.6 mi southwest of Bradley.

DRAINAGE AREA.--329 mi².

PERIOD OF RECORD.--October 1957 to current year.

REVISED RECORDS.--WDR CA-84-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 597 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Apr. 4-8, 11-15, 18-22, 25-29. Records good except those of estimated daily discharge and during the summer months, which are fair. Flow regulated by Lake Nacimiento (formerly Nacimiento Reservoir) beginning in February 1957, usable capacity, 340,000 acre-ft. No diversion upstream from station.

AVERAGE DISCHARGE (unadjusted).--31 years, 291 ft³/s, 210,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,340 ft³/s, Feb. 25, 1969, gage height, 10.92 ft; no flow for many days in 1958-63, 1965, and 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 517 ft³/s, Sept. 1, gage height, 4.06 ft; minimum daily, 7.0 ft³/s, Feb. 21, 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	382	8.8	139	28	25	31	35	41	380	382	367	514
2	382	221	142	28	27	27	28	168	377	386	366	512
3	382	167	139	28	25	27	27	168	373	340	366	508
4	382	114	141	83	27	27	87	189	353	382	307	505
5	381	24	30	26	26	27	87	186	352	382	361	501
6	375	47	28	25	21	27	87	187	367	353	360	497
7	383	118	139	24	20	27	87	36	376	373	303	496
8	383	119	142	24	22	27	86	44	375	348	348	492
9	382	242	88	24	27	27	29	252	375	341	404	489
10	382	205	138	25	27	27	28	335	374	316	484	485
11	382	29	143	83	27	26	87	185	374	357	487	482
12	382	194	30	27	25	26	87	228	374	333	488	478
13	295	198	28	24	20	26	87	334	379	372	488	476
14	378	29	155	83	19	25	87	34	390	372	485	472
15	379	27	139	27	17	26	86	34	390	371	485	469
16	366	147	136	26	13	25	29	241	374	370	485	465
17	370	142	111	29	8.2	25	28	333	394	370	487	461
18	370	142	121	27	8.4	25	249	243	393	371	488	456
19	370	143	28	26	8.9	25	263	350	348	372	489	451
20	307	92	26	27	7.4	25	148	257	358	377	491	450
21	334	28	154	27	7.0	25	147	156	390	376	490	449
22	368	26	140	22	7.0	21	147	156	386	375	490	449
23	347	137	168	23	25	25	29	293	330	374	493	447
24	372	140	21	23	23	25	28	386	321	374	493	444
25	373	141	18	25	24	87	140	358	143	372	493	443
26	343	29	18	27	25	33	147	287	388	372	494	438
27	334	26	17	27	27	26	147	343	389	371	496	434
28	330	28	132	27	26	87	147	160	383	370	498	431
29	324	32	86	26	29	89	146	160	386	371	502	426
30	325	138	85	23	---	90	41	158	386	370	505	422
31	361	---	29	23	---	87	---	292	---	368	509	---
TOTAL	11224	3133.8	2911	967	593.9	1123	2851	6614	10978	11361	14002	14042
MEAN	362	104	93.9	31.2	20.5	36.2	95.0	213	366	366	452	468
MAX	383	242	168	83	29	90	263	386	394	386	509	514
MIN	295	8.8	17	22	7.0	21	27	34	143	316	303	422
AC-FT	22260	6220	5770	1920	1180	2230	5650	13120	21770	22530	27770	27850

CAL YR 1987 TOTAL 69712.1 MEAN 191 MAX 582 MIN 4.0 AC-FT 138300
WTR YR 1988 TOTAL 79800.7 MEAN 218 MAX 514 MIN 7.0 AC-FT 158300

11149900 SAN ANTONIO RIVER NEAR LOCKWOOD, CA

LOCATION.--Lat 35°53'48", long 121°05'14", in Los Ojitos Grant, Monterey County, Hydrologic Unit 18060005, on downstream side of highway bridge, 0.4 mi upstream from Tule Canyon, and 3.3 mi south of Lockwood.

DRAINAGE AREA.--217 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1965 to current year.

REVISED RECORDS.--WDR CA-82-2: Drainage area, gage datum.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 795.00 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 28, 1975, at datum 5.00 ft higher.

REMARKS.--Estimated daily discharges: Dec. 6-9. Records fair except those for period of estimated daily discharges, which are poor. No regulation; some pumping upstream from station.

AVERAGE DISCHARGE.--23 years, 115 ft^3/s, 83,320 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft^3/s, Jan. 26, 1969, gage height, 8.25 ft, datum then in use; maximum gage height, 12.64 ft, from floodmarks, Jan. 26, 1983; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 5	0715	*813	*7.96				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	80	63	70	11	8.2	1.2	.00	.00	.00
2	.00	.00	.00	69	59	54	11	8.5	1.0	.00	.00	.00
3	.00	.00	.00	62	56	43	11	8.5	.76	.00	.00	.00
4	.00	.00	.00	61	54	38	10	7.4	.38	.00	.00	.00
5	.00	.00	.00	510	54	32	10	7.1	.28	.00	.00	.00
6	.00	.00	.00	265	53	30	9.9	7.5	.51	.00	.00	.00
7	.00	.00	.00	179	52	29	9.9	8.1	.95	.00	.00	.00
8	.00	.00	.00	137	50	29	9.9	8.3	.50	.00	.00	.00
9	.00	.00	25	113	47	27	9.4	8.3	.09	.00	.00	.00
10	.00	.00	30	98	48	28	9.4	7.7	.00	.00	.00	.00
11	.00	.00	20	88	47	24	8.9	6.9	.00	.00	.00	.00
12	.00	.00	15	80	46	24	8.9	6.2	.00	.00	.00	.00
13	.00	.00	13	74	43	24	8.4	5.3	.00	.00	.00	.00
14	.00	.00	13	69	41	22	9.9	4.8	.00	.00	.00	.00
15	.00	.00	13	65	42	21	9.4	4.4	.00	.00	.00	.00
16	.00	.00	27	65	43	21	9.7	4.2	.00	.00	.00	.00
17	.00	.00	101	148	39	20	9.3	4.1	.00	.00	.00	.00
18	.00	.00	82	251	40	17	9.0	3.9	.00	.00	.00	.00
19	.00	.00	57	155	37	16	10	3.7	.00	.00	.00	.00
20	.00	.00	45	125	38	15	13	3.5	.00	.00	.00	.00
21	.00	.00	40	107	37	14	24	2.9	.00	.00	.00	.00
22	.00	.00	37	95	37	13	19	2.6	.00	.00	.00	.00
23	.00	.00	34	87	35	13	19	2.4	.00	.00	.00	.00
24	.00	.00	31	83	33	13	17	2.1	.00	.00	.00	.00
25	.00	.00	31	80	34	13	14	1.9	.00	.00	.00	.00
26	.00	.00	27	76	33	12	13	1.7	.00	.00	.00	.00
27	.00	.00	27	74	37	11	13	1.7	.00	.00	.00	.00
28	.00	.00	49	69	40	10	12	1.6	.00	.00	.00	.00
29	.00	.00	130	65	59	9.6	9.5	1.4	.00	.00	.00	.00
30	.00	.00	116	63	---	10	8.9	1.5	.00	.00	.00	.00
31	.00	---	96	62	---	10	---	1.3	---	.00	.00	---
TOTAL	0.00	0.00	1059.00	3555	1297	712.6	347.4	147.7	5.67	0.00	0.00	0.00
MEAN	.00	.00	34.2	115	44.7	23.0	11.6	4.76	.19	.00	.00	.00
MAX	.00	00	130	510	63	70	24	8.5	1.2	.00	.00	.00
MIN	.00	.00	.00	61	33	9.6	8.4	1.3	.00	.00	.00	.00
AC-FT	.0	.0	2100	7050	2570	1410	689	293	11	.0	.0	.0

CAL YR 1987 TOTAL 10062.74 MEAN 27.6 MAX 1130 MIN .00 AC-FT 19960
WTR YR 1988 TOTAL 7124.37 MEAN 19.5 MAX 510 MIN .00 AC-FT 14130

11149900 SAN ANTONIO RIVER NEAR LOCKWOOD, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.
WATER TEMPERATURE: Water years 1966-73.
SEDIMENT DATA: Water years 1966 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1965 to September 1973.
SUSPENDED-SEDIMENT DISCHARGE: October 1965 to September 1973.

REMARKS.--All bedload sample results, except for Apr. 15, were averaged from two sets.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
DEC											
17...	1235	124	9.5	146	49	31	36	48	88	99	100
JAN											
15...	1410	58	12.0	8	1.3	--	--	--	--	--	
MAR											
01...	1250	76	16.5	17	3.5	--	--	--	--	--	
APR											
15...	1605	9.4	16.0	3	0.08	66	--	--	--	--	

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	TEMPER-ATURE WATER (DEG C)	NUMBER OF SAM-PLING POINTS (COUNT)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
JAN								
15...	1350	12.0	1	58	--	--	2	20
15...	1352	12.0	1	58	--	--	1	17
15...	1354	12.0	1	58	--	--	3	16
15...	1356	12.0	1	58	--	--	2	33
15...	1358	12.0	1	58	--	--	2	10
15...	1400	12.0	1	58	--	--	1	3
15...	1402	12.0	1	58	--	1	3	10
15...	1404	12.0	1	58	--	--	3	11
15...	1406	12.0	1	58	--	1	4	10
15...	1408	12.0	1	58	1	2	5	12
APR								
15...	1708	16.0	1	8.9	--	--	2	30
15...	1710	16.0	1	8.9	--	--	2	25
15...	1712	16.0	1	8.9	--	--	2	16
15...	1714	16.0	1	8.9	--	--	2	19
15...	1716	16.0	1	8.9	--	--	4	20
15...	1718	16.0	1	8.9	--	--	2	20
15...	1720	16.0	1	8.9	--	1	7	22
15...	1722	16.0	1	8.9	--	--	4	13
15...	1724	16.0	1	8.9	--	1	2	6
15...	1726	16.0	1	8.9	1	2	8	19

SALINAS RIVER BASIN

11149900 SAN ANTONIO RIVER NEAR LOCKWOOD, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
JAN							
15...	56	82	91	95	96	100	--
15...	54	81	92	96	100	--	--
15...	36	54	64	70	80	100	--
15...	76	90	95	98	98	100	--
15...	19	35	49	58	74	100	--
15...	6	10	15	22	36	76	100
15...	23	43	58	72	87	100	--
15...	30	58	75	85	97	100	--
15...	33	64	76	83	91	100	--
15...	30	49	62	72	89	100	--
APR							
15...	77	92	95	97	99	100	--
15...	63	86	93	97	100	--	--
15...	43	69	83	91	99	100	--
15...	47	64	71	77	89	100	--
15...	49	72	81	86	96	100	--
15...	64	88	96	97	99	100	--
15...	44	70	85	95	100	--	--
15...	34	63	77	84	91	100	--
15...	19	38	53	70	88	100	--
15...	46	73	84	90	97	100	--

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	TEMPER-ATURE WATER (DEG C)	NUMBER OF SAM-PLING POINTS (COUNT)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	STREAM WIDTH (FT)	SEDI-MENT DIS-CHARGE, BEDLOAD (TONS/DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM
DEC							
17...	1310	9.5	32	127	67	249	2
JAN							
15...	1430	12.0	21	58	67	126	1
MAR							
01...	1315	16.5	21	74	67	177	1
APR							
15...	1640	16.0	24	9.4	30	5.1	1
MAY							
19...	1420	28.5	11	3.9	26	1.2	1

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM
DEC							
17...	25	62	86	94	96	99	100
JAN							
15...	24	71	92	97	98	99	100
MAR							
01...	22	64	89	96	98	100	--
APR							
15...	21	65	89	97	99	100	--
MAY							
19...	15	56	85	95	99	100	--

11150500 SALINAS RIVER NEAR BRADLEY, CA

LOCATION.--Lat 35°55'49", long 120°52'04", in SW 1/4 NW 1/4 sec.14, T.23 S., R.10 E., Monterey County, Hydrologic Unit 18060005, on left bank 6 mi northwest of Bradley and 7 mi downstream from San Antonio River.

DRAINAGE AREA.--2,535 mi^2.

PERIOD OF RECORD.--October 1948 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.--WSP 1285: 1950. WDR CA-84-2: 1978.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 442.69 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by Santa Margarita Lake beginning in December 1941, usable capacity, 23,000 acre-ft; Lake Nacimiento (formerly Nacimiento Reservoir) beginning in February 1957, usable capacity, 340,000 acre-ft; and Lake San Antonio beginning in December 1965, usable capacity, 330,000 acre-ft. Several small diversions upstream from station.

AVERAGE DISCHARGE (unadjusted).--40 years, 490 ft^3/s, 355,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 117,000 ft^3/s, Feb. 24, 1969, gage height, 20.34 ft, from floodmarks; no flow at times in 1951, 1954-55, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 686 ft^3/s, Aug. 11, gage height, 5.72 ft; minimum daily, 25 ft^3/s, Feb. 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	335	254	134	69	42	136	328	215	451	501	543	540
2	351	110	152	54	42	336	326	206	457	490	542	549
3	363	272	166	45	42	238	291	295	439	474	556	551
4	370	162	166	44	42	166	282	302	436	483	523	521
5	376	147	174	82	42	128	321	308	431	498	552	491
6	362	93	86	58	44	114	333	300	443	467	583	471
7	352	91	58	53	44	102	337	293	460	433	568	482
8	352	130	134	44	42	93	332	206	466	451	549	491
9	358	144	153	42	38	89	335	201	468	412	556	497
10	358	238	117	48	40	88	296	402	466	423	646	505
11	356	205	154	41	42	83	279	332	461	417	652	510
12	369	81	160	70	42	80	349	311	468	442	586	500
13	354	203	75	62	42	76	364	406	470	423	574	491
14	300	195	51	45	40	73	373	320	477	444	549	468
15	350	80	140	76	38	69	371	198	477	429	540	477
16	350	62	164	56	35	64	364	194	487	434	544	489
17	346	145	161	65	34	60	328	402	469	462	550	495
18	355	161	135	75	30	57	304	331	465	492	564	509
19	365	161	141	137	29	56	433	425	465	488	557	518
20	363	161	68	119	29	58	313	365	422	493	547	514
21	316	122	55	96	28	63	274	355	450	483	551	482
22	337	67	138	85	28	63	267	294	463	472	562	458
23	348	56	156	76	25	156	282	297	514	477	556	449
24	355	129	178	65	30	194	210	420	487	483	530	442
25	355	159	67	51	38	271	195	453	438	495	515	446
26	353	167	49	50	38	316	273	384	405	499	546	443
27	320	78	47	50	41	286	278	440	521	488	583	434
28	341	60	44	49	49	273	283	361	537	495	586	427
29	330	55	125	48	67	312	284	293	537	546	592	423
30	325	54	104	52	---	326	285	291	525	562	575	415
31	346	---	105	47	---	328	---	305	---	560	542	---
TOTAL	10811	4042	3657	1954	1123	4754	9290	9905	14055	14716	17419	14488
MEAN	349	135	118	63.0	38.7	153	310	320	468	475	562	483
MAX	376	272	178	137	67	336	433	453	537	562	652	551
MIN	300	54	44	41	25	56	195	194	405	412	515	415
AC-FT	21440	8020	7250	3880	2230	9430	18430	19650	27880	29190	34550	28740

CAL YR 1987 TOTAL 94085 MEAN 258 MAX 639 MIN 21 AC-FT 186600
WTR YR 1988 TOTAL 106214 MEAN 290 MAX 652 MIN 25 AC-FT 210700

11151300 SAN LORENZO CREEK BELOW BITTERWATER CREEK, NEAR KING CITY, CA

LOCATION.--Lat 36°16'05", long 121°03'55", in NE 1/4 sec.23, T.19 S., R.8 E., Monterey County, Hydrologic Unit 18060005, on left bank 1.3 mi downstream from Bitterwater Creek, 5 mi northeast of King City, and 10 mi upstream from mouth.

DRAINAGE AREA.--233 mi^2.

PERIOD OF RECORD.--October 1958 to current year.

REVISED RECORDS.--WDR CA-85-2: 1969-84(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 431.64 ft above National Geodetic Vertical Datum of 1929. October 1958 to Apr. 24, 1967, at site 500 ft upstream at datum 5.00 ft higher. Apr. 25, 1967, to July 12, 1981, at site 200 ft upstream.

REMARKS.--No estimated daily discharges. Records fair. No regulation; small diversions upstream from station by ranchers and sand-processing plant.

AVERAGE DISCHARGE.--30 years, 14.1 ft^3/s, 10,220 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,500 ft^3/s, Jan. 25, 1969, gage height, 15.33 ft, in gage well, 16.2 ft, from floodmarks, from rating curve extended above 7,100 ft^3/s on basis of slope-area measurement of peak flow; no flow many days in 1961 and 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	2230	*192	*4.90				

Minimum daily, 0.08 ft^3/s, Sept. 5-7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.73	2.8	1.4	14	4.2	63	1.0	1.6	.41	.25	.13	.10
2	.74	2.2	1.4	6.6	3.5	31	1.0	1.6	.41	.23	.13	.10
3	.78	1.7	1.2	3.8	3.5	17	.92	1.4	.35	.23	.13	.10
4	.78	2.2	5.6	4.0	3.5	8.7	.92	1.1	.31	.22	.14	.10
5	.62	3.6	14	17	3.5	5.2	.89	1.1	.29	.23	.12	.08
6	.54	2.7	9.8	46	3.5	3.6	.84	2.0	.32	.24	.14	.08
7	.56	2.2	10	15	3.5	3.1	.80	2.5	.36	.23	.11	.08
8	.65	1.8	3.2	5.8	3.2	2.6	.78	2.9	.46	.24	.11	.09
9	.69	1.6	3.5	3.8	3.1	2.4	.74	2.9	.45	.26	.11	.11
10	.82	1.3	2.3	3.0	2.7	2.3	.78	2.2	.43	.28	.11	.11
11	.89	1.0	2.0	2.7	2.8	2.2	.77	1.6	.37	.30	.11	.11
12	.86	1.1	1.6	2.3	2.7	2.2	.70	1.0	.37	.31	.13	.12
13	.92	1.4	1.4	2.3	2.8	2.2	.82	.83	.35	.31	.13	.11
14	.94	1.8	1.4	2.3	2.6	2.2	1.6	.72	.34	.31	.13	.11
15	.92	1.3	1.4	2.4	2.6	2.2	3.4	.65	.35	.31	.13	.11
16	.95	1.2	2.7	2.6	2.6	2.1	4.2	.65	.36	.28	.14	.12
17	.96	1.4	2.3	49	2.6	2.0	3.4	.95	.36	.28	.16	.11
18	.88	1.4	2.0	131	2.6	2.0	2.4	.99	.34	.24	.13	.11
19	.92	1.2	1.9	52	2.6	1.9	2.5	.72	.30	.25	.13	.11
20	.92	1.3	1.4	25	2.3	1.8	5.4	.49	.34	.24	.13	.11
21	.97	1.8	1.2	13	2.4	1.8	4.5	.37	.41	.25	.13	.12
22	1.4	1.4	1.2	8.3	2.4	1.5	4.2	.32	.41	.23	.14	.13
23	2.9	1.4	1.0	6.0	2.6	1.4	10	.28	.39	.22	.13	.11
24	2.3	1.2	.96	5.5	2.6	1.4	9.2	.27	.38	.21	.13	.11
25	1.6	1.2	.92	4.6	2.3	1.2	7.6	.29	.48	.19	.13	.12
26	1.1	1.1	.92	4.2	2.6	1.2	5.8	.30	.38	.18	.12	.11
27	1.5	1.0	.92	4.2	3.8	1.1	4.3	.32	.35	.14	.11	.10
28	7.6	1.0	4.6	4.2	11	1.0	3.4	.34	.32	.16	.11	.10
29	4.2	1.0	16	4.5	35	1.0	2.9	.34	.29	.14	.11	.10
30	3.0	1.1	39	5.3	---	1.0	2.1	.34	.27	.15	.09	.09
31	3.0	---	27	4.2	---	1.0	---	.37	---	.14	.10	---
TOTAL	45.64	47.4	164.22	454.6	125.1	173.3	87.86	31.44	10.95	7.25	3.85	3.16
MEAN	1.47	1.58	5.30	14.7	4.31	5.59	2.93	1.01	.36	.23	.12	.11
MAX	7.6	3.6	39	131	35	63	10	2.9	.48	.31	.16	.13
MIN	.54	1.0	.92	2.3	2.3	1.0	.70	.27	.27	.14	.09	.08
AC-FT	91	94	326	902	248	344	174	62	22	14	7.6	6.3

CAL YR 1987 TOTAL 1364.29 MEAN 3.74 MAX 223 MIN .13 AC-FT 2710
WTR YR 1988 TOTAL 1154.77 MEAN 3.16 MAX 131 MIN .08 AC-FT 2290

11151700 SALINAS RIVER AT SOLEDAD, CA

LOCATION.--Lat 36°24'40", long 121°19'06", on boundary between San Vicente and Los Coches Grants, Monterey County, Hydrologic Unit 18060005, near right bank on upstream end of pier on U.S. Highway 101, 0.9 mi south of Soledad, and 1 mi upstream from Arroyo Seco River.

DRAINAGE AREA.--3,563 mi^2.

PERIOD OF RECORD.--October 1968 to September 1978, October 1983 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 170 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by Santa Margarita Lake beginning in December 1941, usable capacity, 23,000 acre-ft; Lake Nacimiento (formerly Nacimiento Reservoir) beginning in February 1957, usable capacity, 340,000 acre-ft; and by Lake San Antonio beginning in December 1965, usable capacity, 330,000 acre-ft. Several small diversions for irrigation upstream from station.

AVERAGE DISCHARGE (unadjusted).--15 years (water years 1969-78, 1984-88), 431 ft^3/s, 312,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 106,000 ft^3/s, Feb. 25, 1969, gage height, 23.31 ft; maximum gage height, 23.39 ft, Jan. 26, 1969; no flow Mar. 9-16, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 328 ft^3/s, Nov. 2, gage height, 9.78 ft; maximum gage height, 9.83 ft, Sept. 12; minimum daily, 1.5 ft^3/s, Mar. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	306	57	103	81	12	75	119	54	271	160	196
2	100	322	50	105	76	15	83	100	41	269	182	195
3	119	259	54	103	65	26	94	65	72	267	178	194
4	137	185	73	90	59	76	110	42	97	273	177	193
5	156	217	96	85	57	107	99	52	115	278	182	204
6	158	179	107	78	52	114	91	70	135	270	161	212
7	147	167	108	85	48	114	98	83	151	256	164	215
8	147	146	94	83	49	109	105	102	153	218	190	213
9	150	128	78	74	48	95	101	112	153	172	181	210
10	158	119	83	74	42	83	97	73	155	158	164	209
11	170	122	97	73	38	70	101	45	156	154	166	212
12	188	135	96	67	33	55	84	91	156	141	227	233
13	184	130	98	62	30	42	84	86	180	112	244	230
14	189	105	105	64	27	34	118	68	193	100	209	230
15	178	122	87	71	26	27	151	113	179	89	228	225
16	174	123	92	72	25	21	178	105	178	92	236	211
17	196	96	114	102	22	16	191	55	169	99	221	208
18	207	82	117	124	20	11	205	31	164	114	209	213
19	210	82	127	167	18	8.8	190	68	165	122	200	227
20	205	91	118	133	16	8.1	190	62	203	118	210	228
21	206	101	116	133	16	7.5	252	89	214	114	216	228
22	204	103	111	133	15	6.4	215	93	187	114	230	229
23	219	99	101	129	15	5.8	196	93	186	106	225	219
24	233	86	97	123	14	3.9	187	63	181	96	212	205
25	248	66	112	120	12	3.0	178	49	219	106	205	200
26	271	73	122	112	11	2.0	130	89	250	103	200	215
27	285	83	103	99	10	1.5	105	121	246	87	188	216
28	320	88	91	96	11	18	106	112	209	78	186	203
29	316	75	96	86	13	32	109	131	262	71	202	197
30	310	62	100	83	---	40	116	118	278	76	204	191
31	308	---	101	79	---	61	---	79	---	117	199	---
TOTAL	6171	3952	3001	3008	949	1225.0	4039	2579	5101	4641	6156	6361
MEAN	199	132	96.8	97.0	32.7	39.5	135	83.2	170	150	199	212
MAX	320	322	127	167	81	114	252	131	278	278	244	233
MIN	78	62	50	62	10	1.5	75	31	41	71	160	191
AC-FT	12240	7840	5950	5970	1880	2430	8010	5120	10120	9210	12210	12620

CAL YR 1987 TOTAL 43234.4 MEAN 118 MAX 322 MIN 1.1 AC-FT 85760
WTR YR 1988 TOTAL 47183.0 MEAN 129 MAX 322 MIN 1.5 AC-FT 93590

SALINAS RIVER BASIN

11152000 ARROYO SECO NEAR SOLEDAD, CA

LOCATION.--Lat 36°16'50", long 121°19'18", in SW 1/4 NE 1/4 sec.16, T.19 S., R.6 E., Monterey County, Hydrologic Unit 18060005, on right bank under county road bridge, 1.5 mi downstream from Vaquero Creek, and 10 mi south of Soledad.

DRAINAGE AREA.--244 mi^2.

PERIOD OF RECORD.--November 1901 to current year. Records for water year 1902 incomplete; yearly estimate published in WSP 1315-B.

REVISED RECORDS.--WSP 881: 1902-9 (yearly summary only). WSP 1565: 1916-19, 1920-21(M), 1922, 1926-27, 1928-30(M), 1932, 1934, 1936(M). WSP 1715: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 339.20 ft above National Geodetic Vertical Datum of 1929. Prior to June 16, 1929, nonrecording gage, and June 16, 1929, to Dec. 2, 1941, water-stage recorder at site 1 mi upstream at different datum. Dec. 3, 1941, to Sept. 30, 1959, water-stage recorder at datum 2.00 ft higher. Jan. 30 to Mar. 26, 1969, nonrecording gage at bridge at same datum.

REMARKS.--No estimated daily discharges. Records fair. No regulation or large diversion upstream from station.

AVERAGE DISCHARGE.--87 years, 170 ft^3/s, 123,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,300 ft^3/s, Apr. 3, 1958, gage height, 16.40 ft, datum then in use, from rating curve extended above 12,000 ft^3/s on basis of slope-area measurement at gage height 16.30 ft; no flow at times during several years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	1315	*1,420	*4.00				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	6.8	11	96	66	102	21	27	9.3	1.0	.00	.00
2	.14	7.0	13	82	63	68	20	26	8.5	.97	.00	.00
3	.20	7.0	16	74	60	57	20	26	7.5	1.1	.00	.00
4	.15	8.0	17	89	58	51	20	25	7.3	1.0	.00	.00
5	.08	8.4	75	502	56	47	19	24	6.8	.88	.00	.00
6	.02	8.6	142	237	53	45	18	25	7.3	.54	.00	.00
7	.00	9.0	220	166	52	43	18	29	8.8	.39	.00	.00
8	.01	8.9	88	132	50	41	17	30	12	.34	.00	.00
9	.05	8.4	162	111	49	39	17	28	12	.27	.00	.00
10	.17	8.4	71	96	47	37	16	25	9.8	.23	.00	.00
11	.16	8.4	51	86	46	36	16	22	8.5	.26	.00	.00
12	.14	8.4	40	78	44	35	15	20	7.8	.26	.00	.00
13	.13	8.8	34	71	43	33	15	18	7.1	.23	.00	.00
14	.18	9.5	31	65	42	33	18	17	6.8	.18	.00	.00
15	.17	10	29	63	41	32	27	16	6.3	.14	.00	.00
16	.16	11	143	61	40	31	25	16	5.8	.12	.00	.00
17	.16	10	249	577	39	30	21	16	5.6	.06	.00	.00
18	.16	10	102	477	38	29	20	17	5.3	.05	.00	.00
19	.16	12	71	278	37	29	21	16	4.5	.04	.00	.00
20	.18	11	57	208	36	28	87	15	4.9	.02	.00	.00
21	.22	10	49	171	36	27	70	13	5.5	.01	.00	.00
22	.37	12	43	145	36	27	45	12	5.1	.00	.00	.00
23	.74	13	39	127	36	26	42	11	5.1	.00	.00	.00
24	1.2	11	37	114	34	25	50	11	4.4	.00	.00	.00
25	2.1	11	35	103	34	25	41	10	4.5	.00	.00	.00
26	2.3	11	33	94	33	24	36	9.8	4.0	.00	.00	.00
27	2.9	10	32	87	37	22	33	9.2	4.1	.00	.00	.00
28	5.2	10	197	81	72	22	31	9.0	1.9	.00	.00	.00
29	6.5	10	203	75	93	22	29	9.4	1.8	.00	.00	.00
30	6.8	11	160	72	---	22	28	9.5	1.3	.00	.00	.00
31	4.9	---	119	68	---	21	---	10	---	.00	.00	---
TOTAL	35.65	288.6	2569	4686	1371	1109	856	551.9	189.6	8.09	0.00	0.00
MEAN	1.15	9.62	82.9	151	47.3	35.8	28.5	17.8	6.32	.26	.00	.00
MAX	6.8	13	249	577	93	102	87	30	12	1.1	.00	.00
MIN	.00	6.8	11	61	33	21	15	9.0	1.3	.00	.00	.00
AC-FT	71	572	5100	9290	2720	2200	1700	1090	376	16	.0	.0

CAL YR 1987 TOTAL 16653.90 MEAN 45.6 MAX 2390 MIN .00 AC-FT 33030
WTR YR 1988 TOTAL 11664.84 MEAN 31.9 MAX 577 MIN .00 AC-FT 23140

SALINAS RIVER BASIN

11152300 SALINAS RIVER NEAR CHUALAR, CA
(National stream-quality accounting network station)

LOCATION.--Lat 36°33'14", long 121°32'53", in Guadalupe Y Llanitos de Los Correos Grant, Monterey County, Hydrologic Unit 18060005, near left bank on downstream side of bridge on Chualar-River Road and 2 mi southwest of Chualar.

DRAINAGE AREA.--4,042 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1976 to current year.

REVISED RECORDS.--WDR CA-85-2: 1983-84(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 68.00 ft above National Geodetic Vertical Datum of 1929. Prior to January 1979, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Feb. 18 to Mar. 5, May 5-8, May 12-28, June 2-4, July 16-19, and July 22 to Aug. 3. Records fair except those for estimated discharges, which are poor. Daily discharges prior to January 1979 determined by discharge measurements at this site correlated to streamflow for Salinas River at Soledad (station 11151700) and Salinas River near Spreckels (station 11152500). Flow regulated by Santa Margarita Lake beginning in December 1941, usable capacity, 23,000 acre-ft; Lake Nacimiento (formerly Nacimiento Reservoir) beginning in February 1957, usable capacity, 340,000 acre-ft; and Lake San Antonio beginning in December 1965, usable capacity, 330,000 acre-ft. Large withdrawals from ground-water and small surface-water diversions for municipal use and for irrigation upstream from station.

AVERAGE DISCHARGE.--12 years, 579 ft^3/s, 419,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 53,000 ft^3/s, Mar. 3, 1983, gage height, 14.92 ft, from rating curve extended above 21,000 ft^3/s; no flow at times during most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 311 ft^3/s, Jan. 18, gage height, 4.88 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	127	22	51	43	.40	.00	19	6.8	79	.00	60
2	3.4	131	19	52	42	.00	.00	21	2.0	78	.00	60
3	6.1	138	15	52	39	.00	.00	17	.40	80	3.7	59
4	9.4	111	20	48	35	.00	.00	8.0	.10	82	13	58
5	16	87	30	44	31	.50	.00	1.6	.00	89	16	60
6	21	92	36	75	27	3.2	.00	.50	5.6	88	18	66
7	24	76	38	60	24	14	.00	1.2	16	79	17	69
8	26	65	41	47	23	20	.00	3.0	22	73	18	71
9	26	54	36	43	21	23	.00	9.1	23	59	24	72
10	27	46	30	39	19	22	.00	12	24	43	25	74
11	29	42	32	38	16	20	.00	4.2	24	35	22	75
12	35	43	37	35	12	14	.00	1.2	26	31	24	78
13	42	53	38	33	9.2	8.4	.00	.00	28	26	34	83
14	43	51	42	30	7.0	5.4	.00	.00	34	18	45	86
15	45	43	44	32	5.5	2.5	.00	.00	39	10	45	88
16	42	50	42	34	4.3	.26	3.5	1.0	38	4.1	50	90
17	43	48	42	46	3.1	.00	17	8.6	38	1.6	55	88
18	49	39	46	146	1.3	.00	28	1.7	37	.60	54	88
19	54	34	48	216	.20	.00	38	.30	34	.70	52	90
20	59	35	51	131	.00	.00	43	.00	36	3.0	49	94
21	61	38	51	87	.00	.00	45	.00	47	2.1	50	96
22	63	39	50	80	.00	.00	56	.00	54	.80	56	97
23	68	39	44	75	.00	.00	55	.00	47	.30	60	98
24	69	34	39	70	.00	.00	49	.00	42	.10	60	94
25	75	28	43	66	.20	.00	52	.00	43	.00	58	89
26	82	24	51	62	.60	.00	48	.00	55	.00	55	87
27	91	26	53	58	1.8	.00	34	.00	66	.00	53	91
28	108	31	49	54	2.4	.00	24	.50	70	.00	51	90
29	125	30	50	51	4.0	.00	20	3.1	57	.00	54	87
30	125	24	55	47	---	.00	18	12	71	.00	59	83
31	126	---	50	45	---	.00	---	14	---	.00	60	---
TOTAL	1598.6	1678	1244	1947	371.60	133.66	530.50	139.00	985.90	883.30	1180.70	2421
MEAN	51.6	55.9	40.1	62.8	12.8	4.31	17.7	4.48	32.9	28.5	38.1	80.7
MAX	126	138	55	216	43	23	56	21	71	89	60	98
MIN	3.4	24	15	30	.00	.00	.00	.00	.00	.00	.00	58
AC-FT	3170	3330	2470	3860	737	265	1050	276	1960	1750	2340	4800

CAL YR 1987 TOTAL 17095.21 MEAN 46.8 MAX 1350 MIN .00 AC-FT 33910
WTR YR 1988 TOTAL 13113.26 MEAN 35.8 MAX 216 MIN .00 AC-FT 26010

SALINAS RIVER BASIN

11152300 SALINAS RIVER NEAR CHUALAR, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1977 to current year.
CHEMICAL DATA: Water years 1977 to current year.
BIOLOGICAL DATA: Water years 1977-81.
SPECIFIC CONDUCTANCE: Water years 1977-81.
WATER TEMPERATURE: Water years 1977-81.
SEDIMENT DATA: Water years 1977 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1977 to September 1981.
WATER TEMPERATURE: January 1977 to September 1981.

INSTRUMENTATION.--Water-quality monitor from January 1977 to September 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (FTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
NOV												
16...	1430	53	508	8.4	14.5	3.9	765	11.4	112	70	30	210
JAN												
11...	1200	38	757	8.6	12.0	2.3	765	12.5	116	9	--	290
JUN												
13...	1420	29	438	8.6	27.0	1.7	760	8.2	103	49	170	180
JUL												
11...	1400	35	436	8.5	24.5	5.2	760	8.9	107	K17	K37	180
AUG												
15...	1230	46	403	8.4	23.0	3.4	760	8.8	103	51	100	170
SEP												
13...	1015	85	422	8.2	18.0	2.0	765	9.2	97	44	140	190

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER WH IT FIELD MG/L AS HCO3	CAR-BONATE WATER WH IT FIELD MG/L AS CO3	ALKA-LINITY WAT WH TOT IT FIELD MG/L AS CACO3	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)
NOV												
16...	60	48	21	33	26	1	1.6	169	5	147	147	82
JAN												
11...	110	68	29	58	30	2	2.6	206	8	182	181	140
JUN												
13...	36	43	17	21	20	0.7	2.1	168	3	144	142	71
JUL												
11...	43	44	18	22	20	0.7	1.8	168	2	141	142	60
AUG												
15...	34	41	17	18	18	0.6	1.8	160	5	140	139	57
SEP												
13...	50	44	20	20	18	0.6	1.6	176	--	144	143	58

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)
NOV												
16...	28	0.20	18	322	323	0.44	<0.010	0.690	0.010	<0.010	0.20	0.060
JAN												
11...	48	0.30	19	492	483	0.67	0.030	2.10	<0.010	0.020	0.30	0.070
JUN												
13...	14	0.30	14	269	268	0.37	<0.010	<0.100	<0.010	<0.010	0.30	0.100
JUL												
11...	14	0.20	13	261	259	0.35	<0.010	<0.100	0.020	0.020	0.90	0.060
AUG												
15...	12	0.20	13	241	243	0.33	<0.010	<0.100	<0.010	<0.010	0.40	0.070
SEP												
13...	13	0.20	13	251	256	0.34	<0.010	<0.100	<0.010	<0.010	0.20	0.060

See footnotes at end of table.

11152300 SALINAS RIVER NEAR CHUALAR, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
NOV											
16...	0.050	0.040	<10	2	42	<0.5	<1	<1	<3	<1	6
JAN											
11...	0.060	0.040	<10	2	<100	<10	<1	4	<50	2	<10
JUN											
13...	0.040	0.030	--	--	--	--	--	--	--	--	--
JUL											
11...	0.050	0.030	10	2	40	<0.5	<1	<1	<3	2	<3
AUG											
15...	0.060	0.030	--	--	--	--	--	--	--	--	--
SEP											
13...	0.050	0.040	10	2	41	<0.5	1	<1	<3	<1	11

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV											
16...	<5	9	<1	<0.1	<10	<1	1	<1.0	300	<6	<3
JAN											
11...	<5	20	<10	<0.1	10	4	2	<1.0	440	<6	<10
JUN											
13...	--	--	--	--	--	--	--	--	--	--	--
JUL											
11...	<5	12	<1	<0.1	<10	1	<1	<1.0	260	<6	<3
AUG											
15...	--	--	--	--	--	--	--	--	--	--	--
SEP											
13...	<5	10	<1	<0.1	<10	1	<1	<1.0	270	<6	<3

K Results based on colony count outside acceptable range (non-ideal colony count).
< Actual value is known to be less than the value shown.

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	SAMPLE LOC-ATION, CROSS SECTION (FT FM L BANK)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	SEDI-MENT, SUS-PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV										
16...*	1405	19.0	508	8.4	14.5	765	11.4	112	9	96
16...*	1408	27.0	508	8.4	14.5	765	11.4	112	13	97
16...*	1410	34.0	508	8.4	14.5	765	11.4	112	11	97
16...*	1412	43.0	508	8.4	14.5	765	11.4	112	12	97
16...*	1415	58.0	506	8.4	14.5	765	11.5	113	10	97
JUN										
13...*	1335	9.50	438	8.6	27.0	760	8.1	102	40	87
13...*	1347	23.5	438	8.5	27.0	760	8.2	103	42	94
13...*	1350	30.5	438	8.6	26.5	760	8.3	104	38	94

* Instantaneous streamflow at the time of cross-sectional measurement: Nov. 16, 52 ft^3/s; Jun. 13, 29 ft^3/s.

11152300 SALINAS RIVER NEAR CHUALAR, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV						
16...	1420	52	14.5	11	1.5	97
JAN						
11...	1150	38	12.0	5	0.51	96
JUN						
13...	1345	29	27.0	40	3.1	92
JUL						
11...	1350	35	24.5	20	1.9	86
AUG						
15...	1210	46	23.0	12	1.5	47
SEP						
13...	1030	85	18.0	10	2.3	44

11152500 SALINAS RIVER NEAR SPRECKELS, CA

LOCATION.--Lat 36°37'52", long 121°40'17", in Nacional Grant, Monterey County, Hydrologic Unit 18060005, on right bank on downstream side of bridge on Salinas-Monterey highway, 0.8 mi upstream from El Toro Creek, 1.6 mi northwest of Spreckels, and 2 mi south of Salinas.

DRAINAGE AREA.--4,156 mi^2.

PERIOD OF RECORD.--January 1900 to August 1901, October 1929 to current year. Records for water year 1930 incomplete; yearly estimate published in WSP 1315-B. Published as "near Salinas" 1900-01.

CHEMICAL DATA: Water years 1952-54, 1958-70, 1972-79. Published incorrectly as station 11152300 "near Chualar" in 1967.

BIOLOGICAL DATA: Water years 1975-77.

SPECIFIC CONDUCTANCE: Water years 1975 to January 1977, daily.

WATER TEMPERATURE: Water years 1967-79, daily. Published incorrectly as station 11152300 "near Chualar" in 1967-69.

SUSPENDED-SEDIMENT DISCHARGE: Water years 1950-51; 1967-79, daily; 1986, monthly. Published incorrectly as station 11152300 "near Chualar" in 1967-69.

TURBIDITY: Water year 1973.

REVISED RECORDS.--WSP 1565: 1930, 1935, 1945. WSP 1715: 1959. WSP 1929: Drainage area. WDR CA-85-2: 1983.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 20.56 ft above National Geodetic Vertical Datum of 1929. 1900-01, May 10 to July 29, 1940, nonrecording gages at site 0.3 mi downstream at different datum. July 29, 1940, to May 22, 1969, water-stage recorder at site 0.3 mi downstream at datum 0.69 ft lower. May 23, 1969, to Jan. 13, 1970, nonrecording gage at same site and datum. Mar. 17, 1941, to June 30, 1961, supplementary nonrecording gages.

REMARKS.--Estimated daily discharges: Feb. 11 to Sept. 30. Records fair except those for estimated daily discharges, which are poor. Flow regulated by Santa Margarita Lake beginning in 1941, usable capacity, 23,000 acre-ft; Lake Nacimiento (formerly Nacimiento Reservoir) beginning in February 1957, usable capacity, 340,000 acre-ft; and by Lake San Antonio beginning in December 1965, usable capacity, 330,000 acre-ft. Large withdrawals from ground water and small surface-water diversions for municipal use and for irrigation of about 95,000 acres upstream from station. Low flows consist primarily of waste water from Alisal sewage-disposal plant.

AVERAGE DISCHARGE.--59 years (water years 1930-88), 439 ft^3/s, 318,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 83,100 ft^3/s, Feb. 26, 1969, gage height, 26.51 ft, site and datum then in use; maximum gage height, 26.85 ft, Jan. 16, 1952, site and datum then in use, from floodmarks; no flow at times in 1929-40.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 92 ft^3/s, Jan. 20, gage height, 6.00 ft; minimum daily, 1.4 ft^3/s, Dec. 27, May 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	2.4	2.1	1.8	13	1.7	1.8	2.1	2.2	2.5	2.2	2.2
2	3.1	2.2	2.1	1.8	11	1.7	2.0	1.9	1.8	2.3	2.4	2.4
3	3.2	2.3	2.2	1.8	10	1.9	1.8	1.9	2.2	2.0	2.3	2.4
4	3.4	2.2	2.2	1.8	9.3	1.8	1.9	1.7	2.4	2.4	2.2	2.2
5	3.3	2.2	2.1	1.7	7.3	1.8	1.8	2.2	2.1	2.3	2.6	2.5
6	3.3	2.2	2.1	1.6	4.7	1.8	1.8	2.5	2.0	2.4	2.4	2.1
7	3.3	2.3	2.1	1.7	2.5	2.3	1.7	1.9	2.0	2.3	2.0	2.2
8	3.2	2.3	2.1	1.7	1.9	6.0	1.8	1.4	2.2	2.4	2.2	2.1
9	3.2	2.2	2.0	1.7	1.6	9.2	2.0	1.7	2.1	2.6	2.3	2.2
10	3.2	2.1	2.0	1.7	1.9	10	2.1	2.1	2.4	2.1	2.3	2.4
11	3.2	2.1	2.0	1.6	1.9	9.6	1.8	2.3	2.3	2.3	2.3	2.3
12	3.1	2.1	2.0	1.6	1.8	8.6	1.7	2.1	2.0	2.3	2.5	2.3
13	3.0	2.2	1.9	1.6	1.9	6.4	1.8	2.1	2.2	2.2	2.4	2.2
14	3.0	2.0	1.8	1.6	1.7	4.3	2.0	1.8	2.2	2.3	2.1	2.3
15	2.9	1.6	1.9	1.7	1.8	3.3	1.8	1.6	2.2	2.4	2.1	2.4
16	2.8	1.6	2.0	1.8	2.1	2.8	1.9	1.8	2.2	2.4	2.1	2.2
17	2.8	2.1	1.9	2.0	2.0	2.4	2.0	2.3	2.4	2.1	2.3	2.5
18	2.7	2.2	2.0	1.8	2.2	2.1	1.8	2.3	2.5	2.2	2.2	2.4
19	2.6	2.1	2.0	3.6	2.0	1.9	1.9	2.4	2.0	2.1	2.2	2.4
20	2.5	2.2	2.0	84	1.9	1.9	1.9	2.7	2.0	2.2	2.4	2.4
21	2.6	2.1	1.9	74	1.6	1.9	1.9	2.4	2.2	2.2	2.3	2.1
22	2.6	2.0	2.0	49	1.9	1.9	1.9	1.8	2.3	2.6	2.2	1.9
23	2.6	1.9	1.9	43	2.2	1.8	2.1	2.1	2.2	2.4	2.2	1.9
24	2.6	1.8	2.0	39	2.1	1.7	2.1	2.2	2.5	2.1	2.0	2.4
25	2.6	1.8	1.8	36	2.2	1.9	1.9	2.2	2.4	2.2	1.9	2.4
26	2.5	1.9	1.5	32	1.6	2.0	2.0	2.3	2.2	2.3	2.0	2.5
27	2.5	1.9	1.4	31	1.8	1.9	1.9	2.5	2.4	2.2	2.4	2.3
28	2.6	2.0	1.7	29	1.7	1.8	1.9	2.5	2.3	2.3	2.4	2.5
29	2.5	2.0	1.8	26	1.6	1.8	1.9	2.5	2.3	2.5	2.2	2.3
30	2.3	2.1	1.8	20	---	1.8	2.1	2.7	2.3	1.9	2.3	2.3
31	2.4	---	1.9	17	---	2.0	---	2.1	---	2.1	2.2	---
TOTAL	88.7	62.1	60.2	514.6	99.2	102.0	57.0	66.1	66.5	70.6	69.6	68.7
MEAN	2.86	2.07	1.94	16.6	3.42	3.29	1.90	2.13	2.22	2.28	2.25	2.29
MAX	3.4	2.4	2.2	84	13	10	2.1	2.7	2.5	2.6	2.6	2.5
MIN	2.3	1.6	1.4	1.6	1.6	1.7	1.7	1.4	1.8	1.9	1.9	1.9
AC-FT	176	123	119	1020	197	202	113	131	132	140	138	136

CAL YR 1987 TOTAL 8469.99 MEAN 23.2 MAX 1610 MIN .30 AC-FT 16800
WTR YR 1988 TOTAL 1325.3 MEAN 3.62 MAX 84 MIN 1.4 AC-FT 2630

11152540 EL TORO CREEK NEAR SPRECKELS, CA

LOCATION.--Lat 36°35'00", long 121°42'50", in El Toro Grant, Monterey County, Hydrologic Unit 18060005, on right bank 0.3 mi downstream from San Benancio Gulch and 4.7 mi southwest of Spreckels.

DRAINAGE AREA.--31.9 mi^2.

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 210 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 16, 1983, at site 700 ft upstream at different datum.

REMARKS.--Estimated daily discharges: Nov. 19-21, Nov. 25 to Dec. 14, Jan. 18,19, Jan. 31 to Feb. 5, Feb. 20-27, Apr. 17-25, and June 15-22. Records fair except those for estimated daily discharges, which are poor. No regulation or diversion upstream from station except for small stock ponds. Low flow at times affected by irrigation runoff from upstream golf course.

AVERAGE DISCHARGE.--27 years, 1.74 ft^3/s, 1,260 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 630 ft^3/s, Mar. 2, 1983, gage height, 6.10 ft, site and datum then in use, from rating curve extended above 93 ft^3/s on basis of slope-area measurement at gage height 6.07 ft; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 20 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	0645	*15	*2.02				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.04	.11	.08	.14	.05	.04	.02	.00	.00	.00
2	.00	.00	.04	.10	.08	.09	.04	.04	.01	.00	.00	.00
3	.00	.00	.04	.11	.07	.09	.04	.04	.01	.00	.00	.00
4	.00	.00	.65	.11	.07	.09	.05	.04	.01	.00	.00	.00
5	.00	.00	.20	.10	.07	.10	.04	.05	.01	.00	.00	.00
6	.00	.00	.40	.10	.07	.09	.04	.05	.01	.00	.00	.00
7	.00	.00	.15	.10	.07	.09	.04	.05	.01	.00	.00	.00
8	.00	.00	.60	.08	.07	.09	.05	.06	.01	.00	.00	.00
9	.00	.00	.30	.10	.07	.09	.06	.05	.01	.00	.00	.00
10	.00	.00	.15	.10	.08	.09	.05	.04	.01	.00	.00	.00
11	.00	.00	.07	.11	.07	.08	.03	.04	.01	.00	.00	.00
12	.00	.00	.05	.10	.08	.08	.03	.03	.01	.00	.00	.00
13	.00	.00	.04	.10	.06	.09	.04	.03	.01	.00	.00	.00
14	.00	.01	.04	.10	.07	.09	.14	.03	.01	.00	.00	.00
15	.00	.01	.04	.20	.07	.08	.05	.03	.01	.00	.00	.00
16	.00	.01	.06	.47	.07	.09	.04	.03	.01	.00	.00	.00
17	.00	.01	.04	2.8	.07	.08	.04	.03	.01	.00	.00	.00
18	.00	.01	.04	.80	.06	.09	.04	.03	.01	.00	.00	.00
19	.00	.02	.04	.20	.06	.09	.25	.03	.01	.00	.00	.00
20	.00	.50	.04	.13	.06	.05	.10	.03	.01	.00	.00	.00
21	.00	.06	.04	.13	.06	.05	.05	.03	.01	.00	.00	.00
22	.00	.04	.04	.12	.06	.06	.10	.03	.01	.00	.00	.00
23	.00	.03	.04	.13	.05	.05	.30	.02	.01	.00	.00	.00
24	.00	.04	.04	.11	.05	.05	.15	.02	.03	.00	.00	.00
25	.00	.04	.04	.13	.05	.04	.07	.02	.04	.00	.00	.00
26	.00	.04	.04	.12	.05	.04	.05	.02	.03	.00	.00	.00
27	.00	.04	.04	.12	.30	.04	.04	.02	.02	.00	.00	.00
28	.01	.04	.15	.12	.63	.05	.05	.02	.01	.00	.00	.00
29	.00	.04	1.0	.12	.50	.05	.04	.02	.00	.00	.00	.00
30	.00	.05	.49	.11	---	.04	.04	.02	.00	.00	.00	.00
31	.00	---	.14	.09	---	.04	---	.02	---	.00	.00	---
TOTAL	0.01	0.99	5.09	7.32	3.15	2.29	2.11	1.01	0.37	0.00	0.00	0.00
MEAN	.000	.033	.16	.24	.11	.074	.070	.033	.012	.00	.00	.00
MAX	.01	.50	1.0	2.8	.63	.14	.30	.06	.04	.00	.00	.00
MIN	.00	.00	.04	.08	.05	.04	.03	.02	.00	.00	.00	.00
AC-FT	.02	2.0	10	15	6.2	4.5	4.2	2.0	.7	.0	.0	.0

CAL YR 1987 TOTAL 39.59 MEAN .11 MAX 6.0 MIN .00 AC-FT 79
WTR YR 1988 TOTAL 22.34 MEAN .061 MAX 2.8 MIN .00 AC-FT 44

11152600 GABILAN CREEK NEAR SALINAS, CA

LOCATION.--Lat 36°45'21", long 121°36'34", in La Natividad Grant, Monterey County, Hydrologic Unit 18060011, on left bank at downstream side of county road bridge, 0.3 mi downstream from small left-bank tributary, and 6.2 mi northeast of Salinas.

DRAINAGE AREA.--36.7 mi^2.

PERIOD OF RECORD.--October 1970 to current year. January 1959 to September 1970 in reports of Monterey County Flood Control and Water Conservation District.

REVISED RECORDS.--WDR CA-84-2: 1974(M), 1978(P), 1980-83(P).

GAGE.--Water-stage recorder and crest-stage gage. Concrete control since Oct. 9, 1975. Elevation of gage is 200 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 9, 1975, on right bank at different datum.

REMARKS.--No estimated daily discharges. No flow since Mar. 7, 1987. Natural flow of stream affected by small diversions, storage reservoirs, and return flow from irrigated areas.

AVERAGE DISCHARGE.--18 years, 4.79 ft^3/s, 3,470 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 898 ft^3/s, Apr. 1, 1974, gage height, 11.13 ft, at datum then in use, from rating curve extended above 260 ft^3/s on basis of slope-area measurement of peak flow; no flow from Mar. 7, 1987 to Sept. 30, 1988.

EXTREMES FOR CURRENT YEAR.--No flow during year.

11153500 LLAGAS CREEK NEAR MORGAN HILL, CA

LOCATION.--Lat 37°06'52", long 121°41'22", in Las Uvas Grant, Santa Clara County, Hydrologic Unit 18060002, 500 ft upstream from Llagas Avenue bridge, 0.3 mi downstream from Chesbro Dam, 0.3 mi upstream from small left-bank tributary, and 2.3 mi west of Morgan Hill.

DRAINAGE AREA.--19.6 mi^2.

PERIOD OF RECORD.--

CHEMICAL DATA: Water year 1979 to current year.

SEDIMENT DATA: Water year 1985.

REMARKS.--Streamflow data provided by Santa Clara Valley Water District; not reviewed by U.S. Geological Survey.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (FTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS TOTAL (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3
NOV 18...	1115	2.0	510	8.40	14.0	2.8	755	9.40	92	270	21
JUN 16...	1500	0.4	552	8.20	22.5	8.5	--	--	--	280	34
JUL 13...	1445	0.3	581	7.80	25.5	9.9	755	8.00	99	290	49
AUG 17...	1345	0.5	620	8.10	24.0	--	745	8.50	104	330	47

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
NOV 18...	51	35	14	10	0.4	1.9	251	27	16	0.1	13
JUN 16...	51	37	13	9	0.3	1.8	246	40	13	0.4	3.6
JUL 13...	52	40	14	9	0.4	2.0	246	38	15	0.2	7.4
AUG 17...	58	45	16	9	0.4	2.1	284	41	15	0.1	10

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)
NOV 18...	310	0.42	0.01	<0.01	0.10	0.10	0.05	0.05	0.8
JUN 16...	308	0.42	<0.01	--	<0.10	--	0.02	0.05	0.3
JUL 13...	316	0.43	<0.01	--	<0.10	--	<0.01	0.02	0.4
AUG 17...	358	0.49	<0.01	<0.01	<0.10	<0.10	0.01	0.02	2.6

DATE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	BORON, DISSOLVED (UG/L AS B)	IRON, DISSOLVED (UG/L AS FE)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
NOV 18...	0.3	0.9	0.04	0.02	<0.01	230	4	9.1	5.8	--
JUN 16...	0.3	--	0.04	0.02	0.01	240	<3	--	5.2	0.9
JUL 13...	0.2	--	0.06	0.03	0.02	240	7	--	5.5	--
AUG 17...	0.7	--	0.09	0.04	0.02	240	5	--	6.1	0.9

See footnote at end of table.

11153500 LLAGAS CREEK NEAR MORGAN HILL, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)
NOV										
18...	1115	<10	1	83	<1	<1	1	1	<5	<4
AUG										
17...	1345	<10	2	97	<1	<1	2	3	<5	6

DATE	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
NOV									
18...	13	<0.1	2	2	<1	<1.0	290	6	5
AUG									
17...	24	0.5	<1	4	<1	<1.0	360	12	6

< Actual value is known to be less than the value shown.

PAJARO RIVER BASIN

11154020 UVAS RESERVOIR NEAR MORGAN HILL, CA

LOCATION.--Lat 37°04'02", long 121°41'25", in Las Uvas Grant, T.10 S., R.3 E., Santa Clara County, Hydrologic Unit 18060002, at center of dam on Uvas Creek, and 4.8 mi southwest of Morgan Hill.
DRAINAGE AREA.-- 30.4 mi^2.
PERIOD OF RECORD.--
MONTHLY CONTENTS: December 1957 to September 1984. Prior to October 1959, published in WSP 1735.
REMARKS.--Reservoir is formed by earthfill and rockfill dam completed in 1957. Capacity, 10,000 acre-ft between elevation 410 ft, hydraulic gate valves, and 487.5 ft, crest of spillway. Water released down Uvas Creek for irrigation; at times diverted into Llagas Creek 3.6 mi below Chesbro Reservoir for ground-water recharge by percolation.

WATER-QUALITY RECORDS

370400121412601 UVAS RESERVOIR AT DAM, NEAR MORGAN HILL, CA

LOCATION.--Lat 37°04'00", long 121°41'26", 200 ft above left side of dam.
PERIOD OF RECORD.--
CHEMICAL DATA: October 1987 to September 1988.
BIOLOGICAL DATA: October 1987 to September 1988.
REMARKS.--Lake elevation provided by Santa Clara Valley Water District; not reviewed by U.S. Geological Survey. Phytoplankton analyzed by Chadwick and Associates; laboratory not reviewed by U.S. Geological Survey.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	SAMPLING DEPTH (M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	LIGHT, ATTENUATION COEFFICIENT (ALPHA/METER)	ELEVATION ABOVE NGVD (FEET)
APR										
12...	1327	0.5	368	8.70	17.5	745	8.6	92	5.88	464.76
12...	1328	1.0	370	8.70	17.8	745	8.6	93	5.88	464.76
12...	1329	2.0	381	8.70	16.3	745	8.2	86	6.24	464.76
12...	1330	3.0	383	8.30	16.0	745	8.0	83	7.33	464.76
12...	1331	4.0	384	8.30	15.2	745	6.8	69	6.06	464.76
12...	1332	5.0	384	8.30	14.7	745	6.3	64	5.39	464.76
12...	1333	6.0	383	8.10	14.4	745	5.8	58	5.09	464.76
12...	1334	7.0	382	8.00	14.1	745	5.6	56	4.82	464.76
12...	1335	8.0	381	8.00	13.9	745	5.4	54	4.82	464.76
12...	1336	9.0	382	7.90	13.5	745	5.0	49	4.68	464.76
12...	1337	10.0	380	7.90	13.4	745	5.0	49	5.09	464.76
12...	1338	11.0	380	7.90	13.2	745	4.5	44	4.82	464.76
12...	1339	12.0	379	7.80	12.8	745	3.8	37	6.86	464.76
12...	1340	13.0	378	7.70	12.5	745	3.3	32	7.86	464.76
12...	1341	14.0	378	7.60	12.0	745	2.5	24	10.10	464.76
12...	1342	15.0	378	7.60	11.6	745	1.8	17	15.65	464.76
JUN										
15...	1318	0.5	380	8.40	21.3	750	9.0	103	2.77	458.33
15...	1319	1.0	380	8.40	21.2	750	8.8	101	2.85	458.33
15...	1320	2.0	381	8.40	20.8	750	8.6	98	3.02	458.33
15...	1321	3.0	381	8.30	20.5	750	8.7	98	3.28	458.33
15...	1322	4.0	383	8.30	19.5	750	8.2	91	3.28	458.33
15...	1323	5.0	385	8.20	18.7	750	6.8	74	2.94	458.33
15...	1324	6.0	386	8.10	18.2	750	5.5	59	2.85	458.33
15...	1325	7.0	386	8.00	17.8	750	4.2	45	2.62	458.33
15...	1326	8.0	386	7.90	17.6	750	3.4	36	2.46	458.33
15...	1327	9.0	394	7.80	17.0	750	2.3	24	3.02	458.33
15...	1328	10.0	387	7.70	16.7	750	1.1	12	2.77	458.33
15...	1329	11.0	387	7.70	16.4	750	0.6	6	3.77	458.33
15...	1330	12.0	387	7.60	16.1	750	0.4	4	4.95	458.33
15...	1331	13.0	386	7.60	15.5	750	0.3	3	10.64	458.33
15...	1332	14.0	384	7.60	15.2	750	0.3	3	14.03	458.33
15...	1333	15.0	384	7.50	15.1	750	0.1	1	17.69	458.33
JUL										
12...	1409	0.5	379	8.60	24.0	750	9.4	114	3.47	453.16
12...	1410	1.0	379	8.60	24.0	750	9.2	111	3.57	453.16
12...	1411	2.0	381	8.60	24.0	750	9.4	114	3.57	453.16
12...	1412	3.0	381	8.50	23.9	750	9.4	113	4.01	453.16
12...	1413	4.0	383	8.50	23.8	750	9.2	111	5.09	453.16
12...	1414	5.0	382	8.50	23.8	750	9.2	111	5.55	453.16
12...	1415	6.0	387	8.40	22.5	750	6.5	76	8.83	453.16
12...	1416	7.0	388	8.20	21.5	750	4.5	52	8.83	453.16
12...	1417	8.0	388	8.10	20.7	750	2.2	25	10.10	453.16
12...	1418	9.0	388	8.00	20.0	750	1.7	19	10.64	453.16
12...	1419	10.0	387	7.90	19.7	750	1.6	18	12.49	453.16
12...	1420	11.0	387	7.90	18.9	750	1.5	16	13.77	453.16
12...	1421	12.0	386	7.90	17.8	750	1.3	14	13.53	453.16
12...	1422	13.0	388	7.90	17.6	750	1.1	12	14.60	453.16
12...	1423	14.0	387	7.80	17.4	750	1.0	11	15.27	453.16
12...	1424	15.0	388	7.80	17.4	750	0.9	10	--	453.16

11154020 UVAS RESERVIOR NEAR MORGAN HILL, CA--Continued

370400121412601 UVAS RESERVOIR AT DAM--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	SAMPLING DEPTH (M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	LIGHT, ATTENUATION COEFFICIENT (ALPHA/METER)	ELEVATION ABOVE NGVD (FEET)
AUG										
16...	1359	0.5	428	8.40	22.7	745	8.2	97	9.40	444.53
16...	1400	1.0	426	8.30	22.6	745	8.0	95	12.90	444.53
16...	1401	2.0	426	8.20	22.4	745	5.6	66	12.90	444.53
16...	1402	3.0	424	8.10	22.2	745	4.7	55	12.50	444.53
16...	1403	4.0	427	8.10	22.1	745	4.3	51	12.50	444.53
16...	1404	5.0	425	8.00	22.1	745	4.2	49	14.60	444.53
16...	1405	6.0	421	8.00	22.1	745	4.2	49	16.50	444.53
16...	1406	7.0	421	8.00	22.0	745	4.3	50	17.70	444.53
16...	1407	8.0	420	8.00	22.0	745	3.9	46	20.50	444.53
16...	1408	9.0	420	7.90	22.0	745	3.8	45	21.20	444.53
16...	1409	10.0	420	7.90	22.0	745	3.6	42	22.10	444.53

DATE	TIME	SAMPLING DEPTH (M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS TOTAL (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
APR												
12...	1400	1.0	370	8.70	18.0	745	8.60	93	160	16	36	18
12...	1428	6.0	383	8.10	14.5	745	5.80	58	170	23	37	19
12...	1440	14.0	378	7.60	12.0	745	2.50	24	170	21	36	19
JUN												
15...	1355	1.0	380	8.40	21.0	750	8.80	101	170	11	35	19
15...	1420	5.0	385	8.20	18.5	750	6.80	74	170	12	35	19
15...	1435	12.0	387	7.60	16.0	750	0.40	4	170	12	35	19
JUL												
12...	1435	1.0	379	8.60	24.0	750	9.20	111	180	19	39	20
12...	1500	7.0	388	8.20	21.5	750	4.50	52	180	19	39	20
12...	1510	13.0	388	7.90	17.5	750	1.10	12	180	16	39	19
AUG												
16...	1420	1.0	426	8.30	22.5	745	8.00	95	190	18	40	21
16...	1440	5.0	425	8.00	22.0	745	4.20	49	190	16	40	21
16...	1455	9.0	420	7.90	22.0	745	3.80	45	200	27	43	22

DATE	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)
APR												
12...	13	15	0.5	1.3	148	35	8.7	0.2	7.6	209	<0.01	<0.10
12...	13	14	0.4	1.3	148	36	8.4	0.2	8.2	212	<0.01	<0.10
12...	13	14	0.4	1.3	147	35	8.4	0.2	8.9	210	<0.01	<0.10
JUN												
15...	13	14	0.5	1.4	155	39	8.6	0.3	7.5	217	<0.01	<0.10
15...	15	16	0.5	1.4	154	39	8.5	0.3	7.4	218	<0.01	<0.10
15...	14	15	0.5	1.4	154	38	8.4	0.3	7.9	216	<0.01	<0.10
JUL												
12...	14	14	0.5	1.4	161	36	7.5	0.1	7.4	222	<0.01	<0.10
12...	13	13	0.4	1.3	161	35	7.8	0.1	7.7	221	<0.01	<0.10
12...	13	14	0.4	1.4	160	33	8.2	0.1	9.0	219	<0.01	<0.10
AUG												
16...	14	14	0.5	1.4	169	38	9.5	0.1	8.4	234	<0.01	<0.10
16...	14	14	0.5	1.4	171	39	9.0	0.2	8.6	236	<0.01	<0.10
16...	15	14	0.5	1.4	171	38	9.2	0.1	9.3	241	<0.01	<0.10

See footnote at end of table.

11154020 UVAS RESERVIOR NEAR MORGAN HILL, CA--Continued

370400121412601 UVAS RESERVOIR AT DAM--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)
APR												
12...	--	<0.01	<0.01	--	--	0.3	0.2	0.01	<0.01	<0.01	90	3
12...	--	<0.01	<0.01	--	--	0.3	<0.2	0.02	<0.01	<0.01	90	7
12...	--	<0.01	<0.01	--	--	0.2	0.2	0.02	<0.01	<0.01	90	7
JUN												
15...	--	0.01	0.03	0.29	0.27	0.3	0.3	0.01	<0.01	0.03	90	6
15...	--	<0.01	0.02	--	0.18	0.6	0.2	<0.01	<0.01	<0.01	90	7
15...	--	0.01	0.01	0.29	0.19	0.3	0.2	0.01	<0.01	<0.01	90	12
JUL												
12...	--	<0.01	<0.01	--	--	0.2	<0.2	0.01	<0.01	<0.01	90	<3
12...	--	<0.01	<0.01	--	--	0.4	<0.2	0.02	<0.01	<0.01	100	<3
12...	--	0.11	0.09	0.29	--	0.4	<0.2	0.04	0.02	0.02	90	--
AUG												
16...	--	<0.01	0.01	--	--	0.2	<0.2	0.04	0.02	<0.01	100	<3
16...	--	<0.01	<0.01	--	--	0.5	0.3	0.05	0.02	<0.01	100	<3
16...	<0.10	<0.01	<0.01	--	--	0.4	<0.2	0.03	0.02	<0.01	100	<3

DATE	TIME	SAM-PLING DEPTH (M)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)
AUG							
16...	1455	9.0	<10	1	<1	<1	<1

DATE	COPPER, DIS-SOLVED (UG/L AS CU)	LEAD, DIS-SOLVED (UG/L AS PB)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	ZINC, DIS-SOLVED (UG/L AS ZN)
AUG							
16...	<1	<5	<0.1	1	<1	<1	4

DATE	TIME	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
APR			
12...	1500	K1	K1
JUN			
15...	1445	K1	K10
JUL			
12...	1535	<2	K4

< Actual value is known to be less than the value shown.
K Results based on colony count outside acceptable range (non-ideal colony count).

11154020 UVAS RESERVOIR NEAR MORGAN HILL, CA--Continued

370400121412601 UVAS RESERVOIR AT DAM--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	TRANS-PAR-ENCY (SECCHI DISK) (M)
APR		
12...	1315	1.30
JUN		
15...	1345	1.80
JUL		
12...	1408	1.75
AUG		
16...	1415	0.7

DATE	TIME	SAM-PLING DEPTH (M)	TUR-BID-ITY (FTU)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)
APR					
12...	1400	1.0	2.7	1.10	0.20
12...	1422	3.0	2.7	6.40	1.60
12...	1428	6.0	3.0	5.80	1.30
JUN					
15...	1355	1.0	2.0	5.00	0.50
15...	1406	3.0	1.8	5.20	0.70
15...	1420	5.0	2.0	7.60	1.10
15...	1435	12.0	3.3	1.10	0.20
JUL					
12...	1435	1.0	1.4	6.20	0.60
12...	1450	3.0	1.1	8.80	0.80
12...	1500	7.0	1.8	6.90	0.70
AUG					
16...	1420	1.0	4.5	5.50	0.30
16...	1430	2.0	1.5	6.00	0.30

11154020 UVAS RESERVOIR NEAR MORGAN HILL, CA--Continued

370400121412601 UVAS RESERVOIR AT DAM--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

PHYTOPLANKTON

DATE	4/12/88		4/12/88		4/12/88	
TIME	1400		1422		1428	
DEPTH (M)	1		3		6	
ORGANISM	CELLS/ ML	CELL VOLUME UM^3/ML	CELLS/ ML	CELL VOLUME UM^3/ML	CELLS/ ML	CELL VOLUME UM^3/ML
BACILLARIOPHYTA (diatoms)						
Order Centrales						
Cyclotella ocellata	1005	275370	385	105490	131	35894
Melosira granulata *var. angustissima*	1100	1306800	143	169884	54	64152
Melosira italica	--	--	44	4004	--	--
Melosira lirata	1148	72898	683	43371	220	13970
Stephanodiscus hantzschii	335	112560	11	3696	77	25872
Order Pennales						
Achnanthes deflexa	--	--	86	13330	--	--
Achnanthes minutissima ?	2407	324945	1540	207900	1137	153495
Asterionella formosa	52	19084	86	31562	--	--
Fragilaria vaucheriae	--	--	--	--	34	9248
Navicula sp.	--	--	--	--	34	10098
Nitzschia dissipata	52	84240	--	--	--	--
Nitzschia romana	--	--	--	--	34	1734
Nitzschia sublinearis	52	43680	86	72240	34	28560
Synedra delicatissima	3348	3388176	1369	1385428	567	573804
Synedra sp.	209	509333	--	--	69	168153
CHLOROPHYTA (green algae)						
Actinastrum hantzschii	--	--	--	--	723	56394
Ankistrodesmus falcatus	211	4431	211	4431	--	--
Ankistrodesmus falcatus *var. acicularis*	--	--	--	--	241	6025
Chlamydomonas sp.	211	49796	633	149388	965	227740
Chlorococcum sp.	844	151076	844	151076	482	86278
Crucigenia tetrapedia	--	--	211	34182	--	--
Dictyosphaerium pulchellum	2533	83589	3166	104478	--	--
Franceia ovalis	--	--	--	--	241	37837
Gloeocystis sp.	--	--	844	57392	--	--
Golenkinia radiata	--	--	844	216064	--	--
Heteromastix sp.	--	--	211	20256	--	--
Oocystis sp.	211	29540	211	29540	--	--
Phacotus lenticularis	422	75960	844	151920	241	43380
Scenedesmus armatus	1266	34182	--	--	965	26055
Scenedesmus quadricauda	--	--	422	11816	--	--
Sphaerocystis schroeteri	--	--	--	--	3858	952926
Tetraedron sp.	--	--	422	15192	--	--
CYANOPHYTA (blue-green algae)						
Aphanizomenon flos-aquae	2744	131712	--	--	--	--
Aphanocapsa delicatissima	21318	21318	31450	31450	27969	27969
Aphanocapsa elachista	15830	94980	18152	1198032	6269	37614
Aphanocapsa sp.	--	--	4855	9710	--	--
Aphanothece nidulans	13720	13720	18363	18363	6992	6992
Aphanothece saxicola	2322	6966	50604	151812	2893	8679
Aphanothece sp.	1478	5173	1055	3693	--	--
Chroococcus dispersus	3377	13508	6543	26172	2652	10608
Chroococcus multicoloratus	8232	32928	3166	12664	22182	88728
Chroococcus pallidus	--	--	--	--	482	6507
Chroococcus sp.	844	5064	2533	15198	--	--
Dactylococcopsis fascicularis	211	6330	--	--	--	--
Gloeocystis sp.	--	--	--	--	482	15424
Gloeothece linearis	--	--	422	6752	--	--
Gomphosphaeria lacustris	2110	6330	3799	11397	482	1446
Microcystis sp.	2533	34196	--	--	--	--
Oscillatoria sp.	16886	42215	1900	4750	3135	7838
Synechococcus sp.	2110	12660	2533	15198	6269	37614

11154020 UVAS RESERVOIR NEAR MORGAN HILL, CA--Continued

370400121412601 UVAS RESERVOIR AT DAM--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

PHYTOPLANKTON

DATE	4/12/88		4/12/88		4/12/88	
TIME	1400		1422		1428	
DEPTH (M)	1		3		6	
ORGANISM	CELLS/ ML	CELL VOLUME UM^3/ML	CELLS/ ML	CELL VOLUME UM^3/ML	CELLS/ ML	CELL VOLUME UM^3/ML
CHRYSOPHYTA (golden-brown algae)						
Dinobryon sertularia	2533	1988405	1055	828175	34	1122
Kephyrion ovum	--	--	211	6963	34	26690
EUGLENOPHYTA (euglenoid algae)						
Phacus curvicauda	--	--	211	844000	--	--
Trachelomonas sp.	211	738500	--	--	--	--
PYRRHOPHYTA (dinoflagellates)						
Peridinium sp.	211	2278800	--	--	--	--
CRYPTOPHYTA (cryptomonads)						
Cryptomonas erosa	--	--	211	274300	--	--
Rhodomonas minuta	844	81024	1055	101280	723	69408
TOTAL CELLS/ML		112,920		161,414		90,705
TOTAL UM^3/ML		12,079,489		6,542,549		2,868,254
NUMBER OF SPECIES		35		40		33

11154020 UVAS RESERVOIR NEAR MORGAN HILL, CA--Continued

370400121412601 UVAS RESERVOIR AT DAM--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA
WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

PHYTOPLANKTON

DATE	6/15/88		6/15/88		6/15/88		6/15/88	
TIME	1355		1406		1420		1435	
DEPTH (M)	1		3		5		12	
ORGANISM	CELLS/ ML	CELL VOLUME UM^3/ML	CELLS/ ML	CELL VOLUME UM^3/ML	CELLS/ ML	CELL VOLUME UM^3/ML	CELLS/ ML	CELL VOLUME UM^3/ML
BACILLARIOPHYTA (Diatoms)								
Order Centrales								
Cyclotella sp.	--	--	116	13920	126	15168	63	7584
Melosira distans	16	3002	40	7505	79	15010	--	--
Order Pennales								
Navicula sp.	--	--	--	--	8	2765	--	--
Nitzschia acicularis	8	2212	--	--	--	--	--	--
Nitzschia sp.	--	--	--	--	8	1580	--	--
Skeletonema sp.	--	--	16	632	--	--	--	--
Synedra acus	--	--	--	--	32	18960	--	--
Synedra sp.	40	23700	55	33180	--	--	--	--
CHLOROPHYTA (Green algae)								
Ankistrodesmus falcatus	8	168	32	672	--	--	8	168
Chlamydomonas sp.	8	1896	24	5688	24	5688	8	1896
Closterium sp.	--	--	--	--	--	--	8	2370
Cosmarium sp.	--	--	--	--	8	2765	--	--
Kirchneriella contorta	--	--	8	711	16	1422	--	--
Micractinium pusillum	--	--	126	8216				
Oocystis gigas	--	--	--	--	32	113760	--	--
Oocystis parva	--	--	8	2370	16	4740	8	2370
Scenedesmus bijuga	16	1422	--	--	142	12798	47	4266
Scenedesmus quadricauda	87	7821	16	1422	150	13509	47	4266
Sphaerocystis schroeteri	--	--	--	--	--	--	24	1541
Tetraedron minimum	16	2844	482	86742	--	--	--	--
CHRYSOPHYTA (Golden-brown algae)								
Dinobryon sertularia	379	75840	221	44240	174	34760	--	--
CYANOPHYTA (Blue-green algae)								
Aphanocapsa delicatissima	--	--	427	427	79	79	--	--
Chroococcus dispersus	71	4266	158	9480	79	4740	32	1896
Merismopedia tenuissima	--	--	--	--	126	3792	--	--
Schizothrix calcicola	--	--	--	--	395	7900	79	1580
EUGLENOPHYTA (Euglenoids)								
Euglena sp.	--	--	--	--	24	59250	--	--
Phacus tortus	--	--	8	11850	8	11850	--	--
Phacus sp.	--	--	16	23700	8	11850	--	--
Trachelomonas sp.	--	--	32	25280	32	25280	40	31600
PYRRHOPHYTA (Dinoflagellates)								
Ceratium cornutum	8	94800	--	--	--	--	--	--
Ceratium hirundinella	8	252800	--	--	--	--	--	--
Peridinium quadridens	8	24806	47	148836	32	25280	24	74418
CRYPTOPHYTA (Cryptomonads)								
Cryptomonas sp.	--	--	16	7900	--	--	--	--
TOTAL CELLS/ML	673		1,848		1,598		388	
TOTAL ALGAL BIOMASS AS BIOVOLUME (UM^3/ML)	495,577		432,771		392,946		133,955	
NUMBER OF SPECIES	13		19		22		12	

11154020 UVAS RESERVOIR NEAR MORGAN HILL, CA--Continued

370400121412601 UVAS RESERVOIR AT DAM--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA
WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

PHYTOPLANKTON

DATE	77/12/88		7/12/88		7/12/88	
TIME	1435		1450		1500	
DEPTH (M)	1		3		7	
ORGANISM	CELLS/ ML	CELL VOLUME UM^3/ML	CELLS/ ML	CELL VOLUME UM^3/ML	CELLS/ ML	CELL VOLUME UM^3/ML
BACILLARIOPHYTA (diatoms)						
Order Centrales						
Cyclotella pseudostelligera	92	8300	--	--	--	--
Melosira distans	1101	210000	795	150000	11	2100
Melosira granulata	--	--	150	23000	--	--
Order Pennales						
Nitzschia gracilis	642	320000	826	830000	8	8000
Nitzschia sp.	252	35000	183	37000	--	--
Skeletonema sp.	46	3200	--	--	--	--
CHLOROPHYTA (Green algae)						
Ankistrodesmus falcatus	92	8100	245	22000	--	--
Asterococcus superbus	--	--	--	--	4	8000
Crucigenia tetrapedia	--	--	122	21000	--	--
Dictyosphaerium pulchellum	92	7400	--	--	--	--
Kirchneriella contorta	23	1600	--	--	--	--
Oocystis parva	--	--	31	10000	--	--
Pediastrum tetras var. *tetraodon*	183	56000	122	37000	15	4800
Phacotus lenticularis	596	230000	592	230000	4	1600
Pteromonas angularis	23	1800	61	4900	--	--
Scenedesmus quadricauda	183	16000	244	5000	--	--
Tetraedron minimum	436	77000	367	66000	4	720
CHRYSOPHYTA (Golden-brown algae)						
Dinobryon sociale	115	23000	459	92000	--	--
EUGLENOPHYTA (Euglenoids)						
Euglena sp.	--	--	31	20000	--	--
Phacus sp.	23	6900	31	13000	--	--
Trachelomonas sp.	184	72000	336	130000	45	18000
PYRRHOPHYTA (Dinoflagellates)						
Glenodinium sp.	92	14000	--	--	4	700
Peridinium quadridens	321	1000000	243	1400000	--	--
CRYPTOPHYTA (Cryptomonads)						
Cryptomonas erosa	23	1200	--	--	--	--
TOTAL CELLS/ML		4,519		4,838		95
TOTAL UM^3/ML		2,091,500		3,090,900		43,620
NUMBER OF SPECIES		19		17		8

11154020 UVAS RESERVOIR NEAR MORGAN HILL, CA--Continued

370400121412601 UVAS RESERVOIR AT DAM--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

PHYTOPLANKTON

DATE	8/16/88		8/16/88	
TIME	1420		1430	
DEPTH (M)	1		2	
ORGANISM	CELLS/ ML	CELL VOLUME UM^3/ML	CELLS/ ML	CELL VOLUME UM^3/ML
BACILLARIOPHYTA (Diatoms)				
Order Centrales				
Cyclotella pseudostelligera	516	46000	1284	120000
Melosira distans	1204	230000	734	140000
Melosira granulata	401	60000	183	27000
Order Pennales				
Nitzschia acicularis	--	--	550	160000
Nitzschia gracilis	1033	1000000	826	830000
Nitzschia sp.	115	16000	--	--
Synedra sp.	57	40000	--	--
CHLOROPHYTA (Green algae)				
Ankistrodesmus falcatus	802	72000	367	33000
Asterococcus superbus	--	--	46	12000
Cosmarium sp.	--	--	46	32000
Golenkinia sp.	--	--	46	4600
Kirchneriella contorta	286	20000	183	13000
Tetraedron minimum	57	10000	--	--
EUGLENOPHYTA (Euglenoids)				
Trachelomonas sp.	115	450000	46	18000
PYRRHOPHYTA (Dinoflagellates)				
Glenodinium sp.	401	240000	91	14000
Peridinium quadridens	57	180000	--	--
CRYPTOPHYTA (Cryptomonads)				
Cryptomonas erosa	1261	500000	504	250000
Cryptomonas sp.	229	46000	91	18000
TOTAL CELLS/ML		6,534		4,997
TOTAL UM3/ML		2,910,000		1,671,600
NUMBER OF SPECIES		14		14

11154200 UVAS CREEK NEAR GILROY, CA

LOCATION.--Lat 36°59'32", long 121°34'21", in Las Animas Grant, Santa Clara County, Hydrologic Unit 18060002, on left bank 400 ft upstream from county road bridge, 0.4 mi southwest of Gilroy, and 3.9 mi downstream from Bodfish Creek.

DRAINAGE AREA.--71.2 mi^2.

PERIOD OF RECORD.--January 1959 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 190 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. No flow since Apr. 2, 1987. Flow regulated by Uvas Reservoir 10 mi upstream, capacity, 10,000 acre-ft. Diversion upstream from station for irrigation.

AVERAGE DISCHARGE.--29 years, 43.3 ft^3/s, 31,370 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,200 ft^3/s, Feb. 17, 1986, gage height, 21.82 ft, from rating curve extended above 4,500 ft^3/s on basis of slope-area measurement of peak flow; no flow from Apr. 2, 1987 to Sept. 30, 1988.

EXTREMES FOR CURRENT YEAR.--No flow during year.

PAJARO RIVER BASIN

11156500 SAN BENITO RIVER NEAR WILLOW CREEK SCHOOL, CA

LOCATION.--Lat 36°36'34", long 121°12'07", in SE 1/4 SE 1/4 sec.21, T.15 S., R.7 E., San Benito County, Hydrologic Unit 18060002, on left bank 0.9 mi northwest of Willow Creek School, 1.3 mi downstream from Willow Creek, and 10 mi northwest of San Benito.
DRAINAGE AREA.--249 mi^2.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-B.
REVISED RECORDS.--WSP 1565: 1948(M), 1949. WSP 1315-B: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 925.52 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 28, 1948, and Nov. 11, 1955, to Sept. 30, 1965, at site 0.9 mi downstream at different datum. Jan. 28, 1948, to Nov. 10, 1955, and Oct. 1, 1965, to Oct. 22, 1970, at present site at datum 2.37 ft higher.

REMARKS.--No estimated daily discharges. Records fair. Low flow regulated by Hernandez Reservoir 40 miles upstream beginning in December 1961, capacity, 18,500 acre-ft. Small diversions upstream from station for irrigation.

AVERAGE DISCHARGE.--49 years, 26.0 ft^3/s, 18,840 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,210 ft^3/s, Apr. 3, 1958, gage height, 8.35 ft, site and datum then in use, from rating curve extended above 600 ft^3/s on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of February 1938 reached a stage of about 9.0 ft, from floodmarks at former site 0.9 mi downstream, referenced to datum used at that site.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	0800	*35	*4.74				

Minimum daily, 0.14 ft^3/s, several days June through August.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.35	.25	.30	1.3	3.1	7.9	1.1	.94	.39	.70	.20	.34
2	.35	.25	.35	1.2	3.4	4.7	1.1	.91	.35	.66	.20	.33
3	.35	.25	.35	1.3	3.1	3.8	1.1	.84	.35	.59	.19	.34
4	.35	.25	.55	1.3	2.9	3.0	.99	.83	.33	.46	.14	.32
5	.35	.25	.45	1.3	2.9	2.7	.94	.88	.30	.46	.14	.35
6	.35	.25	.38	1.2	2.9	2.4	.91	1.0	.35	.46	.14	.33
7	.35	.23	.41	1.0	2.8	2.3	.86	1.1	.39	.44	.14	.32
8	.35	.20	.41	1.0	2.6	2.2	.92	1.1	.41	.41	.14	.30
9	.35	.20	.41	1.0	2.6	2.1	.91	.93	.38	.37	.14	.30
10	.33	.20	.41	.95	2.5	2.1	.83	.85	.32	.30	.18	.30
11	.30	.20	.41	1.0	2.3	2.3	.80	.70	.25	.29	.20	.30
12	.30	.20	.38	1.0	2.2	2.3	.81	.66	.23	.25	.20	.30
13	.30	.22	.35	1.0	2.3	2.3	.93	.66	.20	.20	.20	.30
14	.30	.25	.35	1.0	2.2	2.2	1.1	.66	.23	.20	.20	.30
15	.30	.25	.37	1.2	2.1	2.0	1.2	.61	.20	.21	.20	.30
16	.30	.23	.59	1.3	2.1	2.0	1.2	.62	.20	.20	.20	.34
17	.30	.24	.70	13	2.1	1.9	1.1	.78	.20	.20	.21	.35
18	.30	.25	.59	18	2.0	1.9	1.0	.71	.18	.20	5.7	.35
19	.30	.25	.59	11	2.1	1.7	1.1	.64	.20	.20	10	.35
20	.30	.29	.62	8.6	2.1	1.6	1.3	.55	.20	.20	14	.35
21	.30	.31	.66	7.7	2.0	1.5	1.2	.45	.19	.16	17	.35
22	.37	.30	.78	6.3	2.0	1.4	1.1	.39	.14	.14	18	.35
23	.31	.30	.87	5.6	2.0	1.4	1.3	.35	.14	.14	10	.35
24	.25	.30	.90	5.3	2.0	1.4	1.2	.38	.14	.14	4.9	.35
25	.25	.30	.86	4.6	1.9	1.3	1.1	.41	5.4	.15	2.4	.35
26	.25	.30	.99	4.4	1.8	1.2	1.0	.41	2.4	.22	1.3	.35
27	.34	.30	1.1	3.8	1.9	1.1	1.0	.40	1.3	.18	.78	.35
28	.33	.30	1.6	3.6	3.3	1.1	.95	.41	1.0	.20	.54	.35
29	.25	.30	3.7	3.4	8.1	1.1	.95	.43	.84	.20	.39	.35
30	.25	.30	3.0	3.4	---	1.1	.92	.41	.73	.20	.39	.32
31	.25	---	1.4	3.1	---	1.2	---	.41	---	.20	.33	---
TOTAL	9.63	7.72	24.83	119.85	75.3	67.2	30.92	20.42	17.94	8.93	88.75	9.94
MEAN	.31	.26	.80	3.87	2.60	2.17	1.03	.66	.60	.29	2.86	.33
MAX	.37	.31	3.7	18	8.1	7.9	1.3	1.1	5.4	.70	18	.35
MIN	.25	.20	.30	.95	1.8	1.1	.80	.35	.14	.14	.14	.30
AC-FT	19	15	49	238	149	133	61	41	36	18	176	20

CAL YR 1987 TOTAL 2675.39 MEAN 7.33 MAX 32 MIN .20 AC-FT 5310
WTR YR 1988 TOTAL 481.43 MEAN 1.32 MAX 18 MIN .14 AC-FT 955

11158600 SAN BENITO RIVER AT STATE HIGHWAY 156, NEAR HOLLISTER, CA

LOCATION.--Lat 36°51'07", long 121°25'44", in San Justo Grant, San Benito County, Hydrologic Unit 18060002, on right bank at downstream side of bridge on State Highway 156 and 1.6 mi west of Hollister.

DRAINAGE AREA.--607 mi^2.

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 260 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 1-7. Records fair except those for estimated daily discharges, which are poor. Low flows regulated by Hernandez Reservoir 73 mi upstream, capacity, 18,500 acre-ft. Some diversions upstream from station for irrigation. Percolation ponds are constructed upstream from station during summer months.

AVERAGE DISCHARGE.--18 years, 34.9 ft^3/s, 25,290 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,900 ft^3/s, Mar. 1, 1983, gage height, 11.97 ft, from rating curve extended above 4,100 ft^3/s; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sept. 5	1730	*33	*3.04				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	.12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.36
2	1.0	.16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.33
3	.98	.13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.43
4	.96	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.54
5	.94	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.3
6	.92	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.41
7	.90	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.79
8	1.1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.83
9	1.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.53
10	1.2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.49
11	1.7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.55
12	1.4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.42
13	1.2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.39
14	1.1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.37
15	.95	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.49
16	.82	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.44
17	.80	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.48
18	.70	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.42
19	.69	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.35
20	.62	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.31
21	.60	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.28
22	.61	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.27
23	.55	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.30
24	.49	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.28
25	.41	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.21
26	.42	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.20
27	.49	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.17
28	.73	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.18
29	.33	.00	.00	.00	.00	.00	.00	.00	.00	.00	.29	.15
30	.28	.00	.00	.00	---	.00	.00	.00	.00	.00	.47	.14
31	.21	---	.00	.00	---	.00	---	.00	---	.00	.45	---
TOTAL	25.10	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.21	12.41
MEAN	.81	.014	.00	.00	.00	.00	.00	.00	.00	.00	.039	.41
MAX	1.7	.16	.00	.00	.00	.00	.00	.00	.00	.00	.47	1.3
MIN	.21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14
AC-FT	50	.8	.0	.0	.0	.0	.0	.0	.0	.0	2.4	25

CAL YR 1987 TOTAL 534.85 MEAN 1.47 MAX 63 MIN .00 AC-FT 1060
WTR YR 1988 TOTAL 39.13 MEAN .11 MAX 1.7 MIN .00 AC-FT 78

PAJARO RIVER BASIN

11159000 PAJARO RIVER AT CHITTENDEN, CA

(National stream-quality accounting network station)

LOCATION.--Lat 36°54'01", long 121°35'48", in Salsipuedes Grant, Santa Cruz County, Hydrologic Unit 18060002, on left bank at downstream side of bridge on State Highway 129, 0.6 mi downstream from Pescadero Creek, 0.6 mi southeast of Chittenden, and 2.3 mi downstream from San Benito River.

DRAINAGE AREA.--1,186 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1954, published as "near Chittenden."

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 82.28 ft above National Geodetic Vertical Datum of 1929. Prior to May 13, 1949, nonrecording gage on former bridge 100 ft downstream at same datum except for periods in 1947 and 1948 when a water-stage recorder was in use.

REMARKS.--Estimated daily discharges: Aug. 23 to Sept. 5 and Sept. 10-16. Records fair except those for estimated daily discharges, which are poor. Low flows regulated by Hernandez Reservoir, capacity, 18,500 acre-ft; Pacheco Lake, capacity, 6,140 acre-ft; Chesbro Reservoir, capacity, 8,090 acre-ft; Uvas Reservoir, capacity, 10,000 acre-ft (revised); and San Felipe Lake. Many diversions upstream from station for irrigation.

AVERAGE DISCHARGE.--49 years, 158 ft^3/s, 114,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,000 ft^3/s, Dec. 24, 1955, gage height, 32.46 ft, from rating curve extended above 8,300 ft^3/s on basis of slope-conveyance study; maximum gage height, 33.11 ft, Apr. 3, 1958; no flow at times in July and August 1948.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in February 1938 reached a stage of 31.3 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 1	0315	*51	*3.11				

Minimum daily, 0.66 ft^3/s, Sept. 23, 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	5.3	9.2	14	16	39	8.0	12	2.6	3.6	4.1	1.1
2	5.1	5.5	11	14	16	22	7.6	12	2.6	2.8	3.3	1.2
3	4.6	4.6	10	14	15	18	7.0	11	2.8	3.5	2.6	1.1
4	4.3	4.1	11	14	15	17	7.0	12	2.9	4.2	2.7	1.2
5	4.2	4.2	14	15	14	17	6.9	11	2.8	3.6	4.7	1.5
6	4.6	5.0	14	15	14	17	6.8	12	4.9	4.4	4.9	2.4
7	5.7	5.4	20	15	14	16	7.0	12	7.6	4.5	7.3	2.9
8	5.2	5.7	19	16	14	16	6.3	12	6.0	4.3	8.2	3.3
9	5.2	5.6	22	16	14	16	6.1	11	4.5	4.3	6.9	3.5
10	5.8	5.2	16	16	14	14	6.1	10	5.1	5.1	5.9	1.8
11	5.3	5.0	13	16	14	16	5.7	8.4	6.6	5.6	5.9	1.3
12	4.5	4.6	12	16	15	15	5.2	7.7	8.5	6.0	6.3	1.0
13	4.8	5.4	12	16	15	15	5.6	7.1	6.9	5.0	6.5	1.1
14	4.9	6.5	12	15	15	14	7.9	6.4	4.8	5.9	5.6	1.2
15	4.7	6.8	12	17	14	14	10	5.7	3.9	5.5	5.0	1.4
16	4.1	6.5	12	21	14	14	7.7	7.6	3.8	4.8	4.7	1.6
17	5.2	6.6	14	35	14	13	7.2	9.3	4.0	4.2	3.1	2.2
18	6.4	7.8	13	36	14	12	9.1	8.2	4.9	4.4	2.3	2.1
19	7.0	7.5	12	21	14	11	9.2	5.6	4.5	5.0	1.6	1.5
20	6.3	8.1	11	18	14	11	19	5.1	3.4	5.1	1.5	1.3
21	5.7	9.1	11	17	14	12	18	4.8	3.2	4.9	2.0	1.1
22	5.0	8.7	11	17	13	11	11	4.4	3.2	5.5	1.8	.80
23	5.2	8.1	11	17	13	10	12	4.2	4.0	5.3	1.4	.66
24	5.5	7.6	11	17	13	9.8	16	4.2	3.9	7.4	1.3	.66
25	5.3	6.2	11	16	13	8.8	12	4.4	4.4	9.6	1.2	.72
26	5.2	8.8	11	16	14	8.6	11	3.4	3.5	9.3	1.3	.91
27	5.0	8.6	11	16	14	8.3	12	3.2	3.7	8.5	1.2	1.1
28	5.1	8.6	15	16	15	8.8	13	3.4	3.5	4.8	1.2	1.1
29	5.6	9.9	18	16	20	8.5	13	3.7	3.5	4.4	1.3	1.0
30	4.9	8.6	20	16	---	8.1	12	3.6	3.6	4.6	1.4	.78
31	4.4	---	16	16	---	7.9	---	3.0	---	4.1	1.2	---
TOTAL	159.7	199.6	415.2	540	418	428.8	285.4	228.4	129.6	160.2	108.4	43.53
MEAN	5.15	6.65	13.4	17.4	14.4	13.8	9.51	7.37	4.32	5.17	3.50	1.45
MAX	7.0	9.9	22	36	20	39	19	12	8.5	9.6	8.2	3.5
MIN	4.1	4.1	9.2	14	13	7.9	5.2	3.0	2.6	2.8	1.2	.66
AC-FT	317	396	824	1070	829	851	566	453	257	318	215	86

CAL YR 1987 TOTAL 8672.2 MEAN 23.8 MAX 1020 MIN 3.2 AC-FT 17200
WTR YR 1988 TOTAL 3116.83 MEAN 8.52 MAX 39 MIN .66 AC-FT 6180

11159000 PAJARO RIVER AT CHITTENDEN, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952 to current year.
CHEMICAL DATA: Water years 1952 to current year.
BIOLOGICAL DATA: Water years 1978-81.
SPECIFIC CONDUCTANCE: Water years 1978-81.
WATER TEMPERATURE: Water years 1978-81.
SEDIMENT DATA: Water years 1978 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1978 to September 1981.
WATER TEMPERATURE: May 1978 to September 1981.

INSTRUMENTATION.--Water-quality monitor from May 1978 to September 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (FTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)
DEC												
15...	1320	12	1240	8.1	7.0	0.70	760	10.7	89	330	240	520
MAR												
15...	1200	14	1240	8.3	13.5	5.1	755	10.1	98	K24	K27	520
JUN												
14...	1300	4.8	1290	8.3	18.5	1.7	760	7.4	80	280	K10	480
SEP												
12...	1315	1.0	1700	8.2	17.0	0.90	760	9.3	97	390	110	480

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	CARBONATE WATER WH IT FIELD MG/L AS CO3	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)
DEC												
15...	170	95	69	80	25	2	2.3	430	--	352	350	160
MAR												
15...	170	94	70	82	25	2	1.8	415	12	360	357	170
JUN												
14...	68	77	69	100	31	2	2.0	504	--	413	410	130
SEP												
12...	91	78	70	190	46	4	3.3	483	--	396	393	120

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)
DEC												
15...	100	0.30	24	798	754	1.09	0.010	2.80	0.050	0.050	0.20	0.090
MAR												
15...	110	0.30	22	787	783	1.07	0.020	3.90	0.060	0.060	0.40	0.090
JUN												
14...	120	0.40	24	781	782	1.06	0.030	2.70	0.070	0.070	0.60	0.160
SEP												
12...	260	0.30	28	991	987	1.35	0.020	0.960	0.130	0.130	0.70	0.250

See footnote at end of table.

11159000 PAJARO RIVER AT CHITTENDEN, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
DEC											
15...	0.080	0.060	<10	1	110	<0.5	<1	<1	<3	2	17
MAR											
15...	0.090	0.070	140	1	130	<0.5	<1	3	<3	6	200
JUN											
14...	0.150	0.120	50	3	120	<0.5	<1	<1	<3	3	52
SEP											
12...	0.240	0.210	<10	6	160	<0.5	2	<1	<3	2	16

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
DEC											
15...	<5	29	200	<0.1	<10	5	1	1.0	600	<6	<3
MAR											
15...	91	22	280	0.5	<10	6	2	<1.0	610	<6	95
JUN											
14...	<5	20	210	<0.1	<10	5	2	1.0	590	<6	5
SEP											
12...	<5	28	310	<0.1	<10	5	<1	1.0	670	<6	5

K Results based on colony count outside acceptable range (non-ideal colony count).
< Actual value is known to be less than the value shown.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC						
15...	1310	12	7.0	12	0.39	36
MAR						
15...	1115	14	13.0	23	0.87	85
JUN						
14...	1240	4.8	18.0	15	0.19	49

11159200 CORRALITOS CREEK AT FREEDOM, CA

LOCATION.--Lat 36°56'22", long 121°46'10", in Los Corralitos Grant, Santa Cruz County, Hydrologic Unit 18060002, on right bank just upstream from Green Valley Road bridge, 0.2 mi north of Freedom, and 2.3 mi north of Watsonville.

DRAINAGE AREA.--27.8 mi^2.

PERIOD OF RECORD.--October 1956 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 80 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No regulation; Watsonville Water Works can divert up to 8.0 ft^3/s upstream from station for municipal supply, domestic use, and irrigation.

AVERAGE DISCHARGE.--32 years, 15.9 ft^3/s, 11,520 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,610 ft^3/s, Jan. 4, 1982, gage height, 16.66 ft, from rating curve extended above 1,400 ft^3/s on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1955, reached a stage of 15.6 ft, from floodmarks, discharge, 3,620 ft^3/s based on contracted-opening measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	0815	*83	*3.93				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	3.3	.98	.22	.09	.00	.00	.00	.00	.00	.00
2	.00	.00	5.5	.72	.20	.06	.00	.00	.00	.00	.00	.00
3	.00	.00	2.7	.50	.17	.05	.00	.00	.00	.00	.00	.00
4	.00	.00	7.9	.55	.19	.04	.00	.00	.00	.00	.00	.00
5	.00	.00	14	1.4	.20	.04	.00	.00	.00	.00	.00	.00
6	.00	.00	24	1.0	.21	.04	.00	.00	.00	.00	.00	.00
7	.00	.00	14	.65	.19	.10	.00	.00	.00	.00	.00	.00
8	.00	.00	22	3.5	.18	.08	.00	.19	.00	.00	.00	.00
9	.00	.00	8.8	1.7	.17	.12	.00	.12	.00	.00	.00	.00
10	.00	.00	6.3	.82	.17	.08	.00	.0	.00	.00	.00	.00
11	.00	.00	1.8	.87	.18	.17	.00	.00	.00	.00	.00	.00
12	.00	.00	.68	.54	.30	.18	.00	.00	.00	.00	.00	.00
13	.00	.00	.30	.31	.22	.04	.00	.00	.00	.00	.00	.00
14	.00	.00	.23	.24	.13	.09	.00	.00	.00	.00	.00	.00
15	.00	.00	.24	.97	.11	.20	.00	.00	.00	.00	.00	.00
16	.00	.00	.32	13	.09	.18	.00	.00	.00	.00	.00	.00
17	.00	.00	.31	52	.14	.21	.00	.00	.00	.00	.00	.00
18	.00	.00	.19	19	.12	.14	.00	.00	.00	.00	.00	.00
19	.00	.00	.11	7.8	.07	.02	.0	.00	.00	.00	.00	.00
20	.00	1.7	.08	3.7	.07	.01	.24	.00	.00	.00	.00	.00
21	.00	.47	.08	1.6	.09	.07	.05	.00	.00	.00	.00	.00
22	.00	.00	.11	.86	.11	.12	.00	.00	.00	.00	.00	.00
23	.00	.00	.06	.61	.09	.04	3.3	.00	.00	.00	.00	.00
24	.00	.00	.02	.47	.06	.03	.57	.00	.00	.00	.00	.00
25	.00	.00	.06	.36	.08	.05	.09	.00	.00	.00	.00	.00
26	.00	.00	.06	.27	.08	.10	.0	.00	.00	.00	.00	.00
27	.05	.00	.09	.22	.24	.02	.00	.00	.00	.00	.00	.00
28	.0	.00	2.8	.19	.27	.00	.00	.00	.00	.00	00	.00
29	.00	.00	11	.28	.22	.00	.00	.00	.00	.00	.00	.00
30	.00	.06	8.1	.49	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	2.7	.27	---	.00	---	.00	---	.00	.00	---
TOTAL	0.05	2.23	137.84	115.87	4.57	2.37	4.25	0.31	0.00	0.00	0.00	0.00
MEAN	.002	.074	4.45	3.74	.16	.076	.14	.010	.00	.00	.00	.00
MAX	.05	1.7	24	52	.30	.21	3.3	.19	.00	.00	.00	.00
MIN	.00	.00	.02	.19	.06	.00	.00	.00	.00	.00	.00	.00
AC-FT	.1	4.4	273	230	9.1	4.7	8.4	.6	.0	.0	.0	.0

CAL YR 1987 TOTAL 1263.17 MEAN 3.46 MAX 320 MIN .00 AC-FT 2510
WTR YR 1988 TOTAL 267.49 MEAN .73 MAX 52 MIN .00 AC-FT 531

SOQUEL CREEK BASIN

11160000 SOQUEL CREEK AT SOQUEL, CA

LOCATION.--Lat 36°59'29", long 121°57'17", in NE 1/4 sec.10, T.11 S., R.1 W., Santa Cruz County, Hydrologic Unit 18060001, on left bank 0.2 mi upstream from highway bridge in town of Soquel and 0.4 mi downstream from Bates Creek.

DRAINAGE AREA.--40.2 mi^2.

PERIOD OF RECORD.--May 1951 to current year.

REVISED RECORDS.--WSP 1715: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 21.38 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 28 to Jan. 20. Records good except those for estimated daily discharges, which are poor. No regulation; small diversions upstream from station for irrigation.

AVERAGE DISCHARGE.--37 years, 44.2 ft^3/s, 32,020 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,800 ft^3/s, Dec. 23, 1955, gage height, 22.33 ft, from rating curve extended above 2,900 ft^3/s on basis of slope-area measurement of peak flow; no flow on several days during August and September 1977, and Sept. 5, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	Unknown	*649	*4.84				

No flow Sept. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.86	1.5	14	15	9.9	7.1	2.3	4.7	2.1	.97	.59	.14
2	.87	1.5	18	12	9.6	6.2	2.4	4.4	1.9	1.1	.45	.12
3	.83	1.4	15	11	9.0	5.5	2.4	4.3	1.8	1.1	.36	.09
4	.65	1.4	25	29	8.4	5.3	2.5	4.0	1.7	.98	.35	.08
5	.48	1.3	48	40	8.0	5.1	2.3	4.2	1.6	.90	.41	.00
6	.48	1.7	131	25	7.8	5.1	2.2	5.0	1.9	.84	.35	.05
7	.59	1.8	42	19	7.6	4.9	2.2	13	2.1	.89	.30	.12
8	.79	1.6	78	24	7.7	4.8	2.1	13	1.8	.84	.20	.10
9	.90	1.5	28	20	7.5	4.4	2.0	8.1	1.7	.98	.28	.17
10	.99	1.4	21	17	7.3	4.3	1.8	6.3	1.6	1.0	.30	.15
11	.86	1.4	13	18	7.0	4.1	1.6	5.5	1.4	1.0	.36	.21
12	.67	1.3	8.8	14	6.5	4.1	1.7	4.8	1.4	.92	.39	.24
13	.66	3.0	7.3	12	6.3	4.1	2.1	4.1	1.5	.91	.25	.28
14	.75	3.2	6.9	10	6.3	3.9	4.6	3.7	1.4	.74	.17	.21
15	.72	2.2	6.5	17	6.3	3.9	4.2	3.6	1.6	.76	.14	.43
16	.82	1.9	9.4	60	6.1	3.9	3.5	3.7	1.6	.62	.27	.39
17	.78	12	13	250	5.8	3.9	3.1	4.4	1.6	.49	.27	.29
18	.81	6.9	8.1	100	5.5	3.7	2.7	3.8	1.3	.48	.18	.27
19	.88	3.5	6.7	36	5.4	3.7	8.7	3.5	1.2	.50	.17	.17
20	.91	5.6	6.2	25	5.5	3.6	24	3.1	1.4	.75	.43	.11
21	.89	6.0	5.8	22	5.7	3.5	10	2.5	1.3	.72	.22	.06
22	.88	3.8	5.4	17	5.8	3.3	10	2.8	1.3	.58	.19	.14
23	1.2	3.1	4.9	15	6.0	3.2	29	2.3	1.2	.70	.15	.10
24	1.5	2.8	4.9	14	5.9	3.1	15	2.4	1.4	.64	.11	.14
25	1.1	2.6	4.6	13	5.9	3.0	8.9	2.2	1.3	.66	.05	.21
26	.91	2.5	4.6	12	5.9	2.8	7.1	2.1	1.1	.49	.01	.17
27	1.5	2.6	4.8	11	7.0	2.6	6.2	2.2	1.0	.40	.07	.13
28	4.5	2.7	70	10	12	2.5	5.9	2.7	.92	.56	.06	.08
29	2.6	2.7	54	12	8.3	2.6	5.6	3.1	1.0	.48	.12	.10
30	1.7	5.7	31	13	---	2.7	5.3	2.5	1.0	.61	.09	.09
31	1.5	---	21	10	---	2.3	---	2.2	---	.55	.15	---
TOTAL	33.58	90.6	716.9	903	206.0	123.2	181.4	134.2	44.12	23.16	7.44	4.84
MEAN	1.08	3.02	23.1	29.1	7.10	3.97	6.05	4.33	1.47	.75	.24	.16
MAX	4.5	12	131	250	12	7.1	29	13	2.1	1.1	.59	.43
MIN	.48	1.3	4.6	10	5.4	2.3	1.6	2.1	.92	.40	.01	.00
AC-FT	67	180	1420	1790	409	244	360	266	88	46	15	9.6

CAL YR 1987 TOTAL 4231.86 MEAN 11.6 MAX 946 MIN .48 AC-FT 8390
WTR YR 1988 TOTAL 2468.44 MEAN 6.74 MAX 250 MIN .00 AC-FT 4900

11160020 SAN LORENZO RIVER NEAR BOULDER CREEK, CA

LOCATION.--Lat 37°12'24", long 122°08'38", in NE 1/4 SW 1/4 sec.25, T.8 S., R.3 W., Santa Cruz County, Hydrologic Unit 18060001, on right bank 22 ft upstream from culvert on State Highway 9, 100 ft upstream from small right-bank tributary, and 5.8 mi north of town of Boulder Creek.

DRAINAGE AREA.--6.17 mi^2.

PERIOD OF RECORD.--July 1968 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 710 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--20 years, 7.15 ft^3/s, 5,180 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,050 ft^3/s, Jan. 4, 1982, gage height, 11.48 ft, from rating curve extended above 230 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 0.08 ft^3/s, Aug. 2, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 90 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	0845	*40	*3.01				

Minimum daily, 0.13 ft^3/s, Sept. 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.28	.46	.89	2.0	1.6	1.1	.98	.85	.48	.52	.28	.19
2	.28	.52	1.0	1.9	1.5	.85	.85	.85	.47	.51	.28	.17
3	.27	.51	.74	1.8	1.5	.85	.85	.82	.57	.49	.28	.19
4	.23	.43	1.5	2.1	1.5	.85	.85	.75	.62	.52	.28	.16
5	.22	.39	1.4	2.3	1.4	.85	.85	.79	.62	.52	.28	.15
6	.22	.43	5.0	1.9	1.3	.85	.85	.85	.62	.52	.28	.14
7	.23	.42	3.1	1.8	1.3	.85	.84	1.1	.62	.49	.28	.15
8	.31	.35	4.1	2.0	1.1	.85	.84	.77	.52	.45	.28	.17
9	.35	.35	2.8	1.8	1.1	.85	.80	.69	.52	.43	.28	.21
10	.36	.35	2.1	1.7	1.1	.90	.78	.61	.52	.43	.28	.21
11	.32	.32	1.7	1.9	1.1	.91	.74	.55	.52	.43	.28	.20
12	.28	.30	1.4	1.7	1.1	.94	.73	.49	.52	.48	.30	.17
13	.32	.54	1.3	1.7	1.1	.96	.77	.56	.52	.48	.28	.21
14	.33	.36	1.2	1.5	1.1	.85	.93	.52	.49	.49	.28	.20
15	.29	.28	1.2	2.0	1.0	.85	.85	.50	.49	.43	.33	.19
16	.27	.28	2.0	2.7	.98	.85	.85	.60	.52	.43	.29	.17
17	.28	1.0	1.8	16	.98	.85	.84	.54	.52	.37	.28	.17
18	.22	.66	1.5	6.4	.98	.85	.78	.47	.51	.35	.26	.15
19	.23	.43	1.3	4.0	.98	.85	2.1	.45	.45	.35	.28	.13
20	.25	.87	1.3	3.3	.90	.85	1.9	.48	.46	.36	.28	.16
21	.28	.62	1.1	2.9	.85	.85	1.3	.45	.49	.35	.28	.17
22	.25	.36	1.3	2.7	.85	.85	1.4	.43	.44	.35	.28	.20
23	.54	.35	1.1	2.4	.85	.86	1.9	.44	.43	.35	.28	.18
24	.37	.33	1.1	2.2	.85	.90	1.4	.44	.43	.35	.27	.20
25	.31	.39	1.0	2.1	.81	.90	1.1	.43	.44	.35	.26	.23
26	.32	.43	.98	1.9	.73	.91	1.1	.43	.52	.35	.23	.22
27	.47	.43	1.2	1.9	.86	.91	.98	.52	.51	.32	.23	.22
28	.96	.43	3.6	1.8	1.3	.90	.98	.61	.51	.35	.26	.22
29	.52	.43	3.4	2.0	.98	.97	.96	.52	.52	.29	.20	.20
30	.43	.66	3.2	1.9	---	.98	.85	.52	.52	.26	.18	.17
31	.43	---	2.5	1.7	---	.98	---	.52	---	.28	.19	---
TOTAL	10.42	13.68	57.81	84.0	31.70	27.57	30.95	18.55	15.37	12.65	8.32	5.50
MEAN	.34	.46	1.86	2.71	1.09	.89	1.03	.60	.51	.41	.27	.18
MAX	.96	1.0	5.0	16	1.6	1.1	2.1	1.1	.62	.52	.33	.23
MIN	.22	.28	.74	1.5	.73	.85	.73	.43	.43	.26	.18	.13
AC-FT	21	27	115	167	63	55	61	37	30	25	17	11

CAL YR 1987 TOTAL 425.47 MEAN 1.17 MAX 40 MIN .22 AC-FT 844
WTR YR 1988 TOTAL 316.52 MEAN .86 MAX 16 MIN .13 AC-FT 628

11160060 BEAR CREEK AT BOULDER CREEK, CA

LOCATION.--Lat 37°07'40", long 122°06'57", in NW 1/4 NW 1/4 sec.29, T.9 S., R.2 W., Santa Cruz County, Hydrologic Unit 18060001, on left bank on downstream side of private road bridge in town of Boulder Creek and 0.3 mi upstream from mouth.

DRAINAGE AREA.--16.0 mi^2.

PERIOD OF RECORD.--October 1977 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 460 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 6, 7. Records fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--11 years, 20.3 ft^3/s, 14,710 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,480 ft^3/s, Jan. 4, 1982, gage height, 13.30 ft, from rating curve extended above 600 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 0.09 ft^3/s, Sept. 8, 9, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	0730	*226	*2.87				

Minimum daily, 0.09 ft^3/s, Sept. 8, 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.22	.29	3.2	5.2	4.0	2.5	1.3	1.6	.59	.49	.26	.16
2	.20	.28	4.3	4.4	3.7	2.5	1.3	1.5	.60	.43	.27	.16
3	.20	.33	3.0	4.1	3.7	2.3	1.3	1.4	.68	.45	.27	.15
4	.22	.31	17	8.1	3.4	2.3	1.3	1.3	.67	.45	.27	.15
5	.27	.33	9.1	8.9	3.2	2.3	1.2	1.4	.69	.47	.27	.14
6	.25	.40	48	5.8	3.2	2.0	1.2	1.5	.79	.51	.27	.13
7	.20	.40	11	4.8	3.0	2.1	1.1	2.6	.92	.46	.27	.10
8	.14	.36	19	5.1	2.9	2.1	1.1	2.5	.98	.44	.25	.09
9	.17	.36	8.5	4.2	2.9	2.1	1.0	2.4	.86	.43	.24	.09
10	.18	.36	5.2	4.0	2.9	1.9	.99	2.0	.75	.43	.24	.11
11	.19	.36	3.7	3.9	2.8	1.9	1.0	1.9	.71	.47	.26	.12
12	.21	.36	3.4	3.3	2.7	1.9	.89	1.6	.71	.50	.27	.13
13	.23	.62	6.1	3.0	2.6	1.8	.89	1.3	.68	.45	.29	.13
14	.25	.51	6.3	2.7	2.5	1.7	1.2	1.2	.66	.48	.28	.13
15	.24	.32	7.5	4.4	2.5	1.7	1.3	1.2	.57	.51	.26	.12
16	.25	.27	11	11	2.5	1.7	1.3	1.2	.57	.47	.25	.14
17	.28	1.2	5.8	91	2.4	1.7	1.3	1.6	.57	.46	.24	.14
18	.27	.87	3.7	29	2.3	1.6	1.2	1.4	.60	.41	.24	.13
19	.26	.41	3.1	16	2.3	1.6	13	1.2	.51	.32	.22	.13
20	.26	1.5	2.6	11	2.3	1.6	15	.97	.50	.33	.21	.13
21	.26	1.3	2.4	9.4	2.3	1.6	4.4	.84	.51	.40	.21	.13
22	.26	.69	2.4	7.8	2.3	1.5	3.4	.27	.46	.40	.21	.15
23	.68	.59	2.4	6.8	2.3	1.5	10	.61	.45	.40	.22	.15
24	.58	.53	2.2	5.8	2.3	1.4	4.5	.57	.45	.36	.20	.14
25	.37	.74	2.0	5.2	2.3	1.3	3.0	.56	.45	.36	.21	.10
26	.31	1.2	1.9	5.0	2.4	1.3	2.5	.54	.41	.32	.20	.11
27	.41	1.1	3.7	4.6	2.6	1.3	2.1	.55	.38	.31	.19	.13
28	.88	1.4	28	4.4	5.2	1.4	1.8	.54	.39	.28	.18	.14
29	.45	1.5	21	4.5	2.8	1.5	1.7	.59	.44	.27	.16	.13
30	.29	3.1	13	5.0	---	1.5	1.6	.68	.53	.26	.16	.13
31	.27	---	7.2	4.4	---	1.5	---	.72	---	.26	.16	---
TOTAL	9.25	21.99	267.7	292.8	82.3	55.1	83.87	38.24	18.08	12.58	7.23	3.89
MEAN	.30	.73	8.64	9.45	2.84	1.78	2.80	1.23	.60	.41	.23	.13
MAX	.88	3.1	48	91	5.2	2.5	15	2.6	.98	.51	.29	.16
MIN	.14	.27	1.9	2.7	2.3	1.3	.89	.27	.38	.26	.16	.09
AC-FT	18	44	531	581	163	109	166	76	36	25	14	7.7

CAL YR 1987 TOTAL 1224.69 MEAN 3.36 MAX 224 MIN .11 AC-FT 2430
WTR YR 1988 TOTAL 893.03 MEAN 2.44 MAX 91 MIN .09 AC-FT 1770

11160070 BOULDER CREEK AT BOULDER CREEK, CA

LOCATION.--Lat 37°07'36", long 122°07'18", in NW 1/4 NE 1/4 sec.30, T.9 S., R.2 W., Santa Cruz County, Hydrologic Unit 18060001, on right bank under bridge on State Highway 9 in town of Boulder Creek and 750 ft upstream from mouth.

DRAINAGE AREA.--11.3 mi^2.

PERIOD OF RECORD.--October 1976 to current year.

REVISED RECORDS.--WDR CA-84-2: 1980, 1982-83.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 470 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 12-17, Feb. 7-16. Records fair except those for estimated daily discharges, which are poor. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--12 years, 19.2 ft^3/s, 13,910 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,500 ft^3/s, Jan. 4, 1982, gage height, 9.50 ft, from rating curve extended above 330 ft^3/s on basis of slope-area measurement at gage height 6.03 ft; minimum daily, 0.35 ft^3/s, Oct. 16, 17, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	0815	*333	*3.00				

Minimum daily, 0.53 ft^3/s, Sept. 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.69	1.2	9.0	8.3	6.0	3.5	2.1	3.1	2.3	1.7	1.4	.72
2	.72	1.2	15	7.1	5.9	3.3	2.1	3.0	2.3	1.7	1.4	.72
3	.72	1.3	5.4	9.5	5.6	3.1	2.1	2.9	2.3	1.6	1.4	.67
4	.72	1.2	28	10	5.5	3.0	2.1	2.9	2.3	1.6	1.4	.61
5	.72	1.2	17	11	5.2	2.9	2.0	2.9	2.3	1.6	1.4	.63
6	.72	1.3	56	8.6	4.9	2.9	2.0	3.1	2.3	1.5	1.4	.57
7	.72	1.3	16	8.2	4.8	2.9	2.0	5.1	2.5	1.6	1.5	.55
8	.72	1.2	34	9.7	4.6	2.7	2.0	3.4	2.5	1.6	1.5	.59
9	.72	1.2	17	7.9	4.4	2.6	1.9	3.0	2.3	1.6	1.5	.61
10	.76	1.2	13	7.4	4.3	2.5	1.9	2.9	2.3	1.7	1.4	.61
11	.80	1.2	7.9	8.1	4.2	2.5	1.9	2.8	2.3	1.5	1.3	.59
12	.80	1.2	6.0	6.6	4.9	2.5	1.8	2.7	2.2	1.5	1.2	.59
13	.80	3.5	8.4	6.0	4.5	2.5	1.8	2.7	2.0	1.5	1.1	.58
14	.80	1.5	9.5	5.6	4.3	2.5	2.2	2.7	2.0	1.5	.97	.53
15	.80	1.1	12	11	4.1	2.5	2.1	2.6	2.0	1.6	.97	.55
16	.80	1.1	16	24	3.9	2.3	2.0	2.9	2.0	1.5	1.0	.74
17	.84	7.5	8.0	128	3.8	2.3	1.9	3.0	2.0	1.6	.96	.59
18	.86	2.0	5.3	39	3.8	2.3	1.8	2.7	1.8	1.6	.97	.59
19	.88	1.1	4.5	23	3.6	2.3	20	2.6	1.8	1.5	.97	.59
20	.84	5.0	3.9	18	3.5	2.3	10	2.5	1.8	1.6	.91	.62
21	.80	2.3	3.6	15	3.5	2.1	4.2	2.5	1.9	1.7	.89	.65
22	.89	1.3	4.2	13	3.6	2.1	6.7	2.4	1.8	1.7	.88	.69
23	2.3	1.2	3.4	11	3.4	2.1	13	2.5	1.8	1.7	.90	.68
24	1.0	1.1	3.1	11	3.1	2.1	5.2	2.5	1.8	1.5	.85	.68
25	.88	1.3	3.0	10	3.1	2.2	4.3	2.3	1.9	1.5	.84	.74
26	.80	1.5	2.9	9.0	3.1	2.1	3.9	2.3	1.8	1.4	.86	.80
27	1.5	1.5	4.8	8.4	3.3	2.1	3.7	2.3	1.6	1.4	.75	.82
28	3.0	1.5	39	7.9	5.1	2.1	3.5	2.3	1.6	1.4	.75	.80
29	1.5	1.5	33	11	3.7	2.2	3.3	2.5	1.7	1.3	.75	.77
30	1.2	7.6	18	7.6	---	2.2	3.1	2.3	1.7	1.3	.77	.72
31	1.1	---	11	6.3	---	2.3	---	2.3	---	1.3	.72	---
TOTAL	30.40	58.3	417.9	467.2	123.7	77.0	116.6	85.7	60.9	47.8	33.61	19.60
MEAN	.98	1.94	13.5	15.1	4.27	2.48	3.89	2.76	2.03	1.54	1.08	.65
MAX	3.0	7.6	56	128	6.0	3.5	20	5.1	2.5	1.7	1.5	.82
MIN	.69	1.1	2.9	5.6	3.1	2.1	1.8	2.3	1.6	1.3	.72	.53
AC-FT	60	116	829	927	245	153	231	170	121	95	67	39

CAL YR 1987 TOTAL 2068.26 MEAN 5.67 MAX 274 MIN .65 AC-FT 4100
WTR YR 1988 TOTAL 1538.71 MEAN 4.20 MAX 128 MIN .53 AC-FT 3050

SAN LORENZO RIVER BASIN

11160300 ZAYANTE CREEK AT ZAYANTE, CA

LOCATION.--Lat 37°05'10", long 122°02'45", in SE 1/4 sec.2, T.10 S., R.2 W., Santa Cruz County, Hydrologic Unit 18060001, on left bank at downstream side of bridge on Zayante Road in town of Zayante, 0.4 mi upstream from Lompico Creek, 2.0 mi east of Ben Lomond, and 3.2 mi upstream from mouth.

DRAINAGE AREA.--11.1 mi^2.

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder and bedrock notch low-flow control. Elevation of gage is 390 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Jan. 14, 1979, at datum 0.12 ft higher.

REMARKS.--Estimated daily discharges: Mar. 29 to Apr. 13 and June 21 to July 4. Records fair except those for estimated daily discharges, which are poor. No known regulation; small diversions upstream from station for individual use.

AVERAGE DISCHARGE.--31 years, 12.0 ft^3/s, 8,690 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,620 ft^3/s, Jan. 14, 1978, gage height, 8.52 ft, from rating curve extended above 1,200 ft^3/s on basis of slope-area measurement at gage height 7.70 ft; maximum gage height, 8.86 ft, Jan. 4, 1982; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	0815	*160	*2.90				

Minimum daily, 0.13 ft^3/s, Sept. 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.23	.48	3.0	3.6	2.4	1.1	.76	1.2	.70	.38	.29	.16
2	.23	.48	3.8	3.2	2.3	1.2	.75	1.2	.65	.37	.24	.18
3	.22	.47	1.9	3.0	2.1	1.2	.73	1.1	.63	.35	.23	.19
4	.21	.48	6.9	5.0	2.0	1.2	.72	1.1	.64	.34	.27	.17
5	.19	.53	8.4	8.3	2.0	1.2	.70	1.2	.65	.36	.20	.16
6	.19	.62	25	5.4	1.8	1.1	.68	1.3	.66	.31	.20	.15
7	.20	.55	8.8	4.5	1.8	1.1	.66	2.8	.77	.30	.19	.16
8	.24	.52	14	4.6	1.8	1.1	.65	2.0	.73	.32	.19	.18
9	.28	.59	8.1	3.7	1.7	1.0	.64	1.5	.70	.37	.19	.22
10	.35	.64	6.0	3.3	1.7	.97	.63	1.4	.69	.39	.22	.22
11	.32	.65	4.9	3.4	1.6	.96	.62	1.1	.65	.37	.26	.22
12	.32	.66	4.5	2.8	1.5	.98	.61	1.0	.63	.37	.30	.22
13	.34	1.6	5.3	2.4	1.5	1.0	.60	.99	.63	.34	.26	.22
14	.38	1.7	4.0	2.2	1.4	1.0	.76	.93	.62	.33	.26	.22
15	.31	1.0	2.9	3.3	1.4	1.1	.72	.91	.62	.30	.26	.22
16	.31	.75	5.9	9.0	1.4	1.1	.60	.97	.66	.30	.26	.21
17	.31	2.1	6.1	54	1.3	1.1	.57	1.1	.65	.28	.23	.20
18	.31	1.2	4.4	17	1.2	1.1	.54	.98	.60	.26	.20	.19
19	.31	.57	4.0	10	1.2	1.1	5.1	.92	.56	.25	.19	.15
20	.32	1.7	3.6	7.9	1.2	1.1	7.2	.86	.56	.27	.22	.13
21	.35	1.6	3.7	6.8	1.2	.98	2.7	.81	.52	.28	.28	.16
22	.37	.73	4.0	6.0	1.2	1.0	2.3	.76	.50	.25	.26	.18
23	.65	.57	3.8	5.6	1.2	1.0	6.0	.73	.48	.24	.27	.22
24	.65	.52	3.3	4.7	1.2	1.0	3.2	.75	.47	.25	.28	.22
25	.47	.53	3.1	3.3	1.2	.99	2.2	.75	.46	.24	.30	.23
26	.42	.48	3.0	3.0	1.2	.96	1.8	.75	.45	.24	.30	.24
27	.63	.49	4.2	2.9	1.3	.92	1.7	.72	.44	.24	.31	.21
28	1.4	.51	16	2.8	3.0	.85	1.6	.73	.43	.24	.26	.18
29	.68	.52	11	3.2	1.1	.83	1.5	.77	.41	.25	.16	.15
30	.53	1.3	6.9	3.1	---	.80	1.3	.69	.40	.23	.16	.14
31	.50	---	4.7	2.6	---	.78	---	.67	---	.27	.16	---
TOTAL	12.22	24.54	195.2	200.6	45.9	31.82	48.54	32.69	17.56	9.29	7.40	5.70
MEAN	.39	.82	6.30	6.47	1.58	1.03	1.62	1.05	.59	.30	.24	.19
MAX	1.4	2.1	25	54	3.0	1.2	7.2	2.8	.77	.39	.31	.24
MIN	.19	.47	1.9	2.2	1.1	.78	.54	.67	.40	.23	.16	.13
AC-FT	24	49	387	398	91	63	96	65	35	18	15	11

CAL YR 1987 TOTAL 1023.51 MEAN 2.80 MAX 197 MIN .12 AC-FT 2030
WTR YR 1988 TOTAL 631.46 MEAN 1.73 MAX 54 MIN .13 AC-FT 1250

SAN LORENZO RIVER BASIN

11160500 SAN LORENZO RIVER AT BIG TREES, CA

LOCATION.--Lat 37°02'40", long 122°04'17", in Zayante Grant, Santa Cruz County, Hydrologic Unit 18060001, on right bank 20 ft upstream from bridge on Henry Cowell State Park Road, 200 ft upstream from Shingle Mill Creek, 0.3 mi downstream from Zayante Creek, 0.9 mi northwest of Big Trees station on Southern Pacific railroad, and 5.3 mi northwest of Santa Cruz.
DRAINAGE AREA.--106 mi^2.

PERIOD OF RECORD.--October 1936 to current year. Monthly discharge only for some periods, published in WSP 1315-B.
CHEMICAL DATA: Water years 1906-7, 1952-67, 1969-70, 1973-75, 1977, 1980-81.
WATER TEMPERATURE: Water years 1966-82, daily.
SEDIMENT DISCHARGE: Water years 1973-82, daily; 1986, monthly.
REVISED RECORDS.--WSP 1315-B: 1938(M). WSP 1715: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 227.00 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 6, 1972, at site 1.3 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Low flow partially regulated by Loch Lomond Reservoir since 1961, capacity, 8,820 acre-ft, and by a fiber dam located 500 ft upstream from gage. Many small diversions upstream from station for domestic supply.

AVERAGE DISCHARGE.--52 years, 136 ft^3/s, 98,530 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,400 ft^3/s, Dec. 23, 1955, gage height, 22.55 ft, site and datum then in use, from rating curve extended above 11,000 ft^3/s on basis of slope-area measurement of peak flow; maximum gage height, 28.85 ft, Jan. 5, 1982; minimum, 0.8 ft^3/s, regulated, June 25, 1939; minimum daily, 5.6 ft^3/s, July 27, 28, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	0945	*1,460	*7.19				

Minimum daily, 7.6 ft^3/s, Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	14	61	60	30	30	18	22	16	11	11	8.3
2	9.9	14	70	54	30	28	18	22	15	11	10	8.3
3	9.9	14	38	53	28	27	18	22	15	11	11	8.2
4	9.6	13	148	89	29	27	18	21	15	12	11	8.2
5	9.5	14	119	102	27	24	18	21	14	11	11	8.7
6	9.2	14	250	68	25	25	18	22	15	10	10	8.3
7	10	14	115	54	25	26	18	38	16	11	10	9.4
8	11	15	211	69	24	25	16	29	15	11	9.3	7.9
9	11	14	119	56	23	24	17	25	15	11	8.8	7.7
10	11	13	76	53	22	24	16	22	14	11	10	7.8
11	12	13	54	49	23	23	16	21	13	11	10	8.1
12	11	13	42	36	26	23	16	20	13	11	10	8.0
13	11	22	38	35	33	23	16	19	13	11	10	7.8
14	11	22	34	33	29	23	19	18	13	10	10	8.1
15	11	16	34	47	31	22	18	18	13	10	10	8.5
16	11	15	60	111	30	22	19	18	13	10	10	8.7
17	11	50	56	624	28	22	19	21	12	9.9	9.9	8.9
18	11	32	39	237	27	21	18	20	12	9.8	9.0	8.9
19	11	19	36	130	27	21	102	18	12	10	9.6	8.9
20	11	29	34	89	27	20	90	17	12	10	9.5	8.9
21	12	29	32	72	27	20	30	16	13	10	9.3	8.9
22	11	20	33	61	27	20	22	16	12	11	9.0	8.9
23	18	17	29	53	27	20	82	15	12	10	9.0	8.2
24	17	15	30	48	26	20	39	15	12	9.6	8.7	7.9
25	14	14	29	43	26	20	25	26	12	10	8.2	8.3
26	13	14	28	38	26	20	25	17	12	9.4	7.9	8.4
27	17	15	39	36	28	20	27	15	12	9.4	8.2	8.0
28	25	15	251	34	46	19	26	15	12	11	8.3	8.0
29	18	15	176	43	34	19	25	17	11	11	8.5	7.7
30	15	35	118	43	---	18	24	17	11	10	8.2	7.6
31	14	---	78	34	---	18	---	16	---	11	8.5	---
TOTAL	388.1	559	2477	2554	811	694	833	619	395	325.1	293.9	249.5
MEAN	12.5	18.6	79.9	82.4	28.0	22.4	27.8	20.0	13.2	10.5	9.48	8.32
MAX	25	50	251	624	46	30	102	38	16	12	11	9.4
MIN	9.2	13	28	33	22	18	16	15	11	9.4	7.9	7.6
AC-FT	770	1110	4910	5070	1610	1380	1650	1230	783	645	583	495

CAL YR 1987 TOTAL 13512.0 MEAN 37.0 MAX 1360 MIN 9.2 AC-FT 26800
WTR YR 1988 TOTAL 10198.6 MEAN 27.9 MAX 624 MIN 7.6 AC-FT 20230

SAN LORENZO RIVER BASIN

11161000 SAN LORENZO RIVER AT SANTA CRUZ, CA

LOCATION.--Lat 36°59'27", long 122°01'51", in La Carbonera Grant, Santa Cruz County, Hydrologic Unit 18060001, on right bank, in city of Santa Cruz Water Meter Repair compound, 0.3 mi upstream from intersection of State Highways 1 and 9, 1.0 mi north of Santa Cruz, and 2.4 mi upstream from mouth.

DRAINAGE AREA.--115 mi^2.

PERIOD OF RECORD.--October 1937 to September 1988.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Low flow partially regulated by Loch Lomond Reservoir since 1961, capacity, 8,820 acre-ft, and by a fiber dam located 6.8 mi upstream from gage. Water is diverted 50 ft upstream from station by city of Santa Cruz for municipal supply; many small diversions upstream from station for domestic supply.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	1130	*1,140	*7.40				

Minimum daily, 0.01 ft^3/s, Oct. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	5.3	69	60	26	26	12	18	7.6	2.5	2.6	1.5
2	1.3	5.3	72	50	26	23	11	16	8.0	2.2	2.4	1.4
3	.82	5.1	46	46	22	22	11	16	6.4	2.1	2.5	.70
4	.36	7.5	126	83	25	22	12	15	6.5	2.7	3.5	.64
5	.52	4.9	161	116	22	19	12	14	5.8	2.8	3.8	.91
6	.09	5.3	206	72	20	19	12	14	6.1	1.4	3.3	1.1
7	.01	5.2	137	49	19	21	11	15	6.7	.96	2.8	.45
8	1.4	5.2	208	79	19	22	10	36	6.8	1.7	2.0	.80
9	1.3	5.4	133	63	18	19	8.5	25	6.2	1.8	1.8	.48
10	1.7	4.8	88	53	18	18	8.2	20	5.6	1.5	1.8	.39
11	2.4	4.6	56	52	17	18	8.3	17	4.5	2.0	2.5	.67
12	2.8	4.8	39	34	19	17	8.0	15	4.4	1.0	3.2	.89
13	1.7	9.7	36	29	25	16	7.8	14	5.4	1.0	3.2	.77
14	2.2	14	32	25	27	16	10	12	4.6	1.0	2.8	.83
15	3.0	8.5	26	39	23	17	11	12	4.3	.94	1.9	1.2
16	1.4	6.7	52	89	26	16	11	12	4.2	.79	1.9	1.1
17	1.3	43	61	533	23	16	11	13	4.2	.55	2.7	1.0
18	1.7	40	33	239	20	16	11	14	3.0	.93	1.7	1.4
19	3.9	16	29	139	21	16	20	12	2.7	.34	1.3	.96
20	4.2	20	26	97	21	15	146	11	5.1	.51	1.4	.69
21	5.0	34	23	77	21	15	42	9.7	5.1	.75	2.3	.44
22	4.6	19	25	63	21	14	22	8.9	3.5	2.5	2.6	.71
23	8.9	11	23	53	21	14	56	8.5	3.3	.59	2.1	1.2
24	12	11	22	48	21	14	63	8.4	3.4	.37	1.4	.77
25	8.3	12	26	42	20	14	27	13	3.4	.42	.75	1.5
26	7.2	17	23	34	20	14	19	16	3.2	1.2	1.1	1.2
27	7.3	11	24	33	20	14	22	7.9	3.3	1.0	1.1	1.2
28	21	7.3	222	31	39	13	22	6.9	2.3	2.2	1.4	.83
29	15	6.8	162	36	31	12	20	8.9	1.9	2.6	2.0	.93
30	9.4	17	124	43	---	12	19	8.8	1.8	2.5	1.6	.90
31	6.2	---	79	31	---	12	---	7.9	---	3.1	.96	---
TOTAL	139.50	367.4	2389	2438	651	522	663.8	425.9	139.3	45.95	66.41	27.56
MEAN	4.50	12.2	77.1	78.6	22.4	16.8	22.1	13.7	4.64	1.48	2.14	.92
MAX	21	43	222	533	39	26	146	36	8.0	3.1	3.8	1.5
MIN	.01	4.6	22	25	17	12	7.8	6.9	1.8	.34	.75	.39
AC-FT	277	729	4740	4840	1290	1040	1320	845	276	91	132	55

WTR YR 1988 TOTAL 7875.82 MEAN 21.5 MAX 533 MIN .01 AC-FT 15620

11161300 CARBONERA CREEK AT SCOTT'S VALLEY, CA

LOCATION.--Lat 37°03'02", long 122°00'45" in San Augustin Grant, Santa Cruz County, Hydrologic Unit 18060001, on right bank at east city limits of Scott's Valley, 1.1 mi upstream from Glen Canyon Road, 3.3 mi east of Felton, and 4.1 mi upstream from Branciforte Creek.

DRAINAGE AREA.--3.60 mi^2.

PERIOD OF RECORD.--February 1985 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 550 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from gage. Low flows affected by return flow from urban irrigation and by periodic flushing of upstream county well.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 934 ft^3/s, Mar. 15, 1986, gage height, 9.48 ft, from rating curve extended above 190 ft^3/s on basis of slope-area measurement of peak flow; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	0615	*247	*6.28				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	.02	7.7	2.5	1.1	.67	.06	.14	.00	.00	.00	.00
2	.01	.12	7.9	2.2	1.1	.48	.04	.42	.00	.00	.00	.01
3	.00	.02	1.1	2.3	.96	.49	.04	.58	.00	.15	.00	.01
4	.00	.09	26	21	.90	.37	.11	.21	.00	.00	.01	.01
5	.00	.54	18	11	.88	.36	.05	.52	.00	.00	.00	.01
6	.01	.23	30	4.4	1.0	.32	.14	.91	.00	.00	.01	.02
7	.04	.02	4.9	6.8	.74	.32	.07	11	.06	.00	.00	.00
8	.01	.02	31	5.2	.64	.30	.12	.58	.03	.00	.00	.02
9	.00	.01	13	3.6	.68	.45	.13	.30	.00	.00	.01	.08
10	.19	.00	5.1	2.5	.76	.22	.03	.26	.00	.00	.00	.09
11	.00	.00	2.9	3.6	.64	.34	.03	.09	.02	.00	.02	.01
12	.00	.00	1.9	1.8	.56	.22	.03	.07	.00	.67	.00	.00
13	.00	2.8	1.4	1.5	.49	.21	.14	.05	.00	.01	.01	.00
14	.00	.09	1.1	1.3	.48	.22	2.6	.07	.00	.00	.00	.01
15	.00	.02	2.9	5.8	.48	.24	.12	.03	.00	.00	.00	.01
16	.07	.08	9.2	18	.48	.16	.06	.34	.00	.00	.00	.00
17	.00	10	2.9	61	.39	.16	.06	.08	.00	.00	.00	.00
18	.00	.50	1.4	12	.49	.19	.06	.03	.01	.00	.00	.00
19	.00	.12	1.2	6.8	.47	.16	23	.03	.00	.00	.00	.00
20	.00	6.6	.89	4.9	.50	.14	2.0	.02	.00	.00	.00	.00
21	.00	.55	.85	4.0	.54	.15	2.9	.02	.00	.00	.01	.00
22	.00	.24	1.1	3.1	.56	.13	4.4	.01	.00	.00	.00	.00
23	1.0	.10	.70	2.7	.60	.13	15	.01	.00	.00	1.1	.32
24	.02	.05	.57	2.3	.56	.12	1.2	.01	.00	.00	.20	.07
25	.01	.04	.56	1.9	.69	.08	.72	.01	.00	.00	.00	.24
26	.00	.03	.65	1.8	.49	.07	.56	.01	.01	.00	.01	.00
27	3.9	.04	7.0	1.7	5.2	.08	.49	.01	.00	.00	.02	.22
28	2.3	.03	38	1.5	3.4	.06	.44	.03	.00	.00	.00	.00
29	.10	.03	18	3.4	1.8	.32	.36	.02	.00	.00	.01	.00
30	.02	9.3	6.1	1.7	---	.06	.46	.01	.00	.01	.01	.00
31	.02	---	3.4	1.4	---	.46	---	.00	---	.00	.01	---
TOTAL	7.78	31.69	247.42	203.7	27.58	7.68	55.42	15.87	0.13	0.84	1.43	1.13
MEAN	.25	1.06	7.98	6.57	.95	.25	1.85	.51	.004	.027	.046	.038
MAX	3.9	10	38	61	5.2	.67	23	11	.06	.67	1.1	.32
MIN	.00	.00	.56	1.3	.39	.06	.03	.00	.00	.00	.00	.00
AC-FT	15	63	491	404	55	15	110	31	.3	1.7	2.8	2.2

CAL YR 1987 TOTAL 821.39 MEAN 2.25 MAX 125 MIN .00 AC-FT 1630
WTR YR 1988 TOTAL 600.67 MEAN 1.64 MAX 61 MIN .00 AC-FT 1190

11162500 PESCADERO CREEK NEAR PESCADERO, CA

LOCATION.--Lat 37°15'39", long 122°19'40", in SW 1/4 sec.5, T.8.S., R.4 W., San Mateo County, Hydrologic Unit 18050006, on left bank at downstream side of highway bridge, 3.0 mi east of Pescadero, and 5.3 mi upstream from mouth.

DRAINAGE AREA.--45.9 mi^2.

PERIOD OF RECORD.--April 1951 to current year.
CHEMICAL DATA: Water year 1977, monthly.
WATER TEMPERATURE: Water years 1965-79, daily; 1980, 1986, monthly.
SEDIMENT DISCHARGE: Water years 1971, 1973, 1980, daily; 1986, monthly.

REVISED RECORDS.--WSP 1445: 1952-53(M). WSP 1715: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 62.3 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. Minor regulation from swimming pools in San Mateo County Memorial Park and Portola State Park during summer months. Small diversions upstream from station by pumping.

AVERAGE DISCHARGE.--37 years, 43.0 ft^3/s, 31,150 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,420 ft^3/s, Dec. 23, 1955, gage height, 21.27 ft, from rating curve extended above 2,700 ft^3/s on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	1230	*475	*4.75				

Minimum daily, 0.16 ft^3/s, Aug. 31.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.75	1.9	5.6	22	12	6.8	3.4	4.3	2.8	1.3	.52	.21
2	.75	1.9	9.0	18	11	6.7	3.2	4.0	2.7	1.5	.46	.18
3	.70	1.8	8.1	17	10	5.8	3.2	3.9	2.7	1.4	.34	.24
4	.61	1.8	11	15	9.6	5.5	3.2	3.7	2.6	1.3	.37	.20
5	.58	1.8	25	19	9.0	5.2	3.2	3.8	2.5	1.3	.43	.22
6	.45	1.8	37	17	8.6	5.1	3.2	3.7	2.6	1.2	.44	.18
7	.64	1.7	44	15	8.2	4.8	3.1	5.7	2.9	1.2	.50	.17
8	.58	1.6	42	15	7.7	4.8	3.0	6.6	2.9	1.3	.48	.25
9	.40	1.8	35	13	7.3	4.5	3.0	5.1	2.7	1.2	.43	.27
10	.43	1.8	20	13	7.0	4.2	3.0	4.1	2.5	1.1	.34	.20
11	.54	1.5	14	14	6.9	4.2	2.8	3.7	2.4	1.1	.44	.21
12	.55	1.5	11	14	6.6	4.0	2.7	3.4	2.5	.99	.58	.22
13	.63	1.9	8.2	12	6.4	4.0	2.7	3.3	2.5	1.0	.49	.27
14	.58	3.1	7.4	11	6.2	4.0	3.1	3.2	2.3	1.0	.48	.20
15	.83	3.4	6.4	15	6.0	4.0	3.4	3.0	2.3	1.0	.56	.19
16	.85	2.3	9.6	21	5.6	4.0	3.6	3.4	2.3	1.1	.59	.22
17	.90	2.8	13	222	5.5	3.9	3.7	3.9	2.1	1.1	.64	.21
18	.94	5.7	10	108	5.5	3.7	3.6	4.1	2.3	.98	.53	.20
19	.77	4.1	8.4	53	5.2	3.7	13	3.6	2.2	.79	.55	.23
20	.75	4.6	7.0	37	5.2	3.7	24	3.4	2.1	.80	.48	.19
21	.75	6.1	6.3	29	5.2	3.7	11	3.1	2.0	.74	.36	.21
22	.75	4.3	6.5	24	5.2	3.7	8.0	2.9	1.8	.71	.26	.23
23	1.1	2.8	6.9	19	5.2	3.6	18	2.7	1.7	.55	.19	.29
24	1.1	2.3	6.1	17	5.2	3.7	13	2.6	1.8	.65	.20	.25
25	1.4	1.9	5.3	15	5.2	3.6	8.4	2.5	1.8	.70	.25	.23
26	1.6	1.6	5.0	13	4.9	3.6	6.6	2.6	1.8	.71	.20	.26
27	1.5	1.6	5.4	12	4.9	3.4	5.8	2.5	1.7	.65	.21	.24
28	3.5	1.6	40	11	7.6	3.3	5.2	3.0	1.6	.54	.23	.24
29	5.9	1.6	58	12	8.0	3.3	4.8	3.6	1.4	.54	.23	.29
30	3.0	2.0	54	17	---	3.6	4.6	3.4	1.3	.51	.18	.37
31	2.1	---	33	14	---	3.5	---	3.0	---	.47	.16	---
TOTAL	35.93	74.6	558.2	854	200.9	131.6	179.5	111.8	66.8	29.43	12.12	6.87
MEAN	1.16	2.49	18.0	27.5	6.93	4.25	5.98	3.61	2.23	.95	.39	.23
MAX	5.9	6.1	58	222	12	6.8	24	6.6	2.9	1.5	.64	.37
MIN	.40	1.5	5.0	11	4.9	3.3	2.7	2.5	1.3	.47	.16	.17
AC-FT	71	148	1110	1690	398	261	356	222	132	58	24	14

CAL YR 1987 TOTAL 3041.97 MEAN 8.33 MAX 347 MIN .40 AC-FT 6030
WTR YR 1988 TOTAL 2261.75 MEAN 6.18 MAX 222 MIN .16 AC-FT 4490

SAN GREGORIO CREEK BASIN

11162570 SAN GREGORIO CREEK AT SAN GREGORIO, CA

LOCATION.--Lat 37°19'33", long 122°23'08", in San Gregorio Grant, San Mateo County, Hydrologic Unit 18050006, on right bank at downstream side of bridge on Old Coast Highway, 0.1 mi south of town of San Gregorio, and 1.4 mi upstream from mouth.

DRAINAGE AREA.--50.9 mi^2.

PERIOD OF RECORD.--October 1969 to current year.
SEDIMENT DISCHARGE: Water year 1986, monthly.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 11.40 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--19 years, 40.6 ft^3/s, 29,410 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,910 ft^3/s, Jan. 4, 1982, gage height, 21.28 ft, from rating curve extended above 560 ft^3/s on basis of slope-area measurement of peak flow; no flow for many days in 1972, 1977, and 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*), from rating curve extended above 790 ft^3/s on basis of slope-area measurement at gage height 21.28 ft:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	0900	*1,700	*7.80				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.91	18	27	18	6.3	2.1	2.6	.98	.03	.00	.00
2	.04	.54	24	22	16	6.5	2.1	2.6	.54	.03	.00	.00
3	.04	.22	23	22	14	4.1	2.6	2.3	.29	.03	.00	.00
4	.04	.39	32	23	13	3.7	3.6	2.4	.33	.03	.00	.00
5	.09	1.1	47	33	12	3.5	3.4	2.2	.05	.03	.00	.00
6	.06	1.1	48	24	12	3.5	2.9	2.2	.57	.03	.00	.00
7	.05	1.1	26	20	11	3.4	2.3	3.1	1.3	.03	.00	.00
8	.05	.99	34	20	9.9	3.2	1.2	4.1	.74	.03	.00	.00
9	.06	1.3	20	19	9.6	3.3	1.7	3.0	.24	.03	.00	.00
10	.07	1.0	18	22	9.3	3.8	1.4	2.3	.28	.03	.00	.00
11	.04	.82	15	34	8.5	3.8	1.1	2.2	.41	.02	.00	.00
12	.04	.88	9.2	28	7.9	3.8	1.2	2.2	.17	.03	.00	.00
13	.03	2.1	6.4	23	8.0	3.9	1.2	1.9	.39	.03	.00	.00
14	.03	10	5.4	20	7.3	4.0	2.0	1.9	.57	.03	.00	.00
15	.06	6.8	4.7	56	7.2	3.9	2.5	1.9	.40	.03	.00	.00
16	.04	3.5	5.4	92	7.0	3.1	1.9	2.0	.25	.02	.00	.00
17	.03	6.7	6.1	549	6.0	2.6	2.9	2.6	.03	.02	.00	.00
18	.07	21	5.3	157	5.8	2.8	2.9	2.1	.15	.02	.00	.00
19	.11	11	5.1	75	5.6	2.6	13	1.7	.16	.02	.00	.00
20	.02	13	4.7	48	5.3	3.2	16	1.4	.87	.01	.00	.00
21	.02	26	4.8	35	5.3	3.8	5.7	.82	.77	.01	.00	.00
22	.01	14	5.7	28	5.3	4.1	3.7	.63	.42	.01	.00	.00
23	.11	8.7	8.0	24	5.2	4.3	10	.54	.40	.01	.00	.00
24	1.2	6.7	6.6	21	4.9	3.5	6.6	.58	.05	.01	.00	.00
25	.71	5.7	6.3	18	4.5	2.7	4.2	.56	.07	.01	.00	.00
26	1.4	4.8	6.3	16	4.9	2.7	3.5	.51	.04	.00	.00	.00
27	1.3	4.3	7.6	15	4.6	3.6	3.2	.51	.18	.00	.00	.00
28	6.1	4.3	56	13	8.1	3.6	3.2	.72	.03	.00	.00	.00
29	13	4.3	117	23	6.2	3.0	3.0	1.9	.03	.00	.00	.00
30	6.0	5.2	96	36	---	3.2	2.9	1.9	.03	.00	.00	.00
31	1.9	---	42	21	---	2.1	---	1.2	---	.00	.00	---
TOTAL	32.75	168.45	713.6	1564	242.4	111.6	114.0	56.57	10.74	0.58	0.00	0.00
MEAN	1.06	5.61	23.0	50.5	8.36	3.60	3.80	1.82	.36	.019	.00	.00
MAX	13	26	117	549	18	6.5	16	4.1	1.3	.03	.00	.00
MIN	.01	.22	4.7	13	4.5	2.1	1.1	.51	.03	.00	.00	.00
AC-FT	65	334	1420	3100	481	221	226	112	21	1.2	.0	.0

CAL YR 1987 TOTAL 4404.45 MEAN 12.1 MAX 1100 MIN .01 AC-FT 8740
WTR YR 1988 TOTAL 3014.69 MEAN 8.24 MAX 549 MIN .00 AC-FT 5980

11162630 PILARCITOS CREEK AT HALF MOON BAY, CA

LOCATION.--Lat 37°28'00", long 122°25'59", on north boundary of Miramontes Grant, San Mateo County, Hydrologic Unit 18050006, on left bank 50 ft downstream from State Highway 1, 0.3 mi northwest of town of Half Moon Bay, and 1.0 mi upstream from mouth.

DRAINAGE AREA.--27.2 mi^2.

PERIOD OF RECORD.--July 1966 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 25 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 17, 1983, at site 800 ft downstream at different datum.

REMARKS.--Estimated daily discharges: Mar. 7-25. Records fair. Flow slightly regulated by storage in Pilarcitos Lake 10 mi upstream, capacity, 3,100 acre-ft. Water is diverted to city of San Francisco water system; small diversions for irrigation upstream from station by pumping.

AVERAGE DISCHARGE (unadjusted).--22 years, 15.6 ft^3/s, 11,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,750 ft^3/s, Jan. 4, 1982, gage height, 13.08 ft, site and datum then in use, from rating curve extended above 1,000 ft^3/s on basis of contracted-opening measurement of peak flow; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s and maximum (*), from rating curve extended above 200 ft^3/s on basis of slope-area measurement at gage height 9.97 ft:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	0730	*399	*4.43				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.28	1.4	3.3	6.5	3.9	.26	1.3	.16	.00	.00	.00
2	.00	.27	1.2	3.3	6.4	3.3	.36	.84	.14	.00	.00	.00
3	.00	.20	3.6	8.3	5.9	3.0	.45	.65	.15	.00	.00	.00
4	.00	.07	22	16	5.6	2.7	.42	.59	.15	.00	.00	.00
5	.00	.10	5.1	14	5.2	2 8	.29	.75	.14	.00	.00	.00
6	.00	.13	23	8.1	5.0	2.8	.22	.83	.18	.00	.00	.00
7	.00	.19	6.1	7.0	5.0	2.4	.11	1.9	.13	.00	.00	.00
8	.00	.18	19	6.8	5.0	2.1	.14	1.4	.07	.00	.00	.00
9	.00	.29	6.2	6.8	4.4	2.0	.04	.96	.04	.00	.00	.00
10	.00	.09	8.6	6.8	4.5	1.9	.06	.75	.04	.00	.00	.00
11	.00	.07	4.6	10	4.4	1.8	.18	.57	.05	.00	.00	.00
12	.00	.21	2.5	6.3	4.2	1.7	.08	.59	.15	.00	.00	.00
13	.00	3.6	1.8	5.4	4.2	1.5	.14	.48	.14	.00	.00	.00
14	.00	.62	1.4	5.0	4.1	1.3	.36	.37	.00	.00	.00	.00
15	.00	.33	1.4	23	4.1	1.2	.31	.34	.02	.00	.00	.00
16	.00	.29	1.8	28	3.9	1.0	.30	1.1	.00	.00	.00	.00
17	.00	8.3	2.1	134	3.4	.94	.29	.84	.00	.00	.00	.00
18	.00	1.1	1.2	50	3.6	.85	.25	.36	.00	.00	.00	.00
19	.00	.41	.99	31	3.6	.75	11	.25	.00	.00	.00	.00
20	.00	6.4	.69	21	3.6	.73	5.1	.17	.00	.00	.00	.00
21	.00	1.0	.50	16	3.9	.66	2.8	.11	.00	.00	.00	.00
22	.00	.42	1.7	13	3.9	.65	2.8	.25	.00	.00	.00	.00
23	.00	.36	.60	12	3.7	.64	5.3	.27	.00	.00	.00	.00
24	.00	.32	.52	10	3.8	.63	2.7	.20	.00	.00	.00	.00
25	.00	.28	.50	9.2	4.0	.66	2.0	.10	.00	.00	.00	.00
26	.00	.25	.52	8.4	3.6	.62	1.6	.12	.00	.00	.00	.00
27	.08	.26	1.9	7.3	4.0	.62	1.6	.15	.00	.00	.00	.00
28	3.9	.28	13	6.7	4.9	.59	1.5	.38	.00	.00	.00	.00
29	.80	.26	11	11	3.7	.31	1.5	.55	.00	.00	.00	.00
30	4.3	1.1	9.1	9.8	---	.22	1.1	.33	.00	.00	.00	.00
31	.74	---	4.1	6.9	---	.26	---	.22	---	.00	.00	---
TOTAL	9.82	27.66	158.12	504.4	128.1	44.53	43.26	17.72	1.56	0.00	0.00	0.00
MEAN	.32	.92	5.10	16.3	4.42	1.44	1.44	.57	.052	.00	.00	.00
MAX	4.3	8.3	23	134	6.5	3.9	11	1.9	.18	.00	.00	.00
MIN	.00	.07	.50	3.3	3.4	.22	.04	.10	.00	.00	.00	.00
AC-FT	19	55	314	1000	254	88	86	35	3.1	.0	.0	.0

CAL YR 1987 TOTAL 1977.67 MEAN 5.42 MAX 334 MIN .00 AC-FT 3920
WTR YR 1988 TOTAL 935.17 MEAN 2.56 MAX 134 MIN .00 AC-FT 1850

11162800 REDWOOD CREEK AT REDWOOD CITY, CA

LOCATION.--Lat 37°26'58", long 122°13'57", in Pulgas Grant, San Mateo County, Hydrologic Unit 18050004, at Menlo Country Club, on right bank 200 ft upstream from Alameda de las Pulgas bridge and 2.5 mi south of Redwood City Old Post Office.

DRAINAGE AREA.--1.82 mi^2.

PERIOD OF RECORD.--September 1959 to current year.

REVISED RECORDS.--WSP 1929: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 83.92 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Low flow at times affected by return flow from urban irrigation.

AVERAGE DISCHARGE.--29 years, 1.18 ft^3/s, 855 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 644 ft^3/s, Jan. 31, 1963, gage height, 9.36 ft, from rating curve extended above 180 ft^3/s on basis of slope-area measurement of peak flow and computation of peak flow through culvert; maximum gage height, 11.55 ft, Nov. 29, 1970 (backwater from culvert trash racks); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 130 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	0615	*173	*4.79				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.09	.57	.55	.70	.32	.12	.10	.02	.02	.01	.01
2	.02	.06	.73	.76	.65	.23	.11	.11	.04	.02	.01	.0
3	.02	.05	.21	1.8	.70	.21	.12	.11	.20	.02	.01	.0
4	.02	.05	4.4	1.8	.56	.21	.12	.10	.04	.02	.01	.0
5	.03	.05	.72	1.1	.55	.23	.11	.09	.04	.03	.01	.0
6	.02	.05	4.7	.71	.55	.21	.11	.09	.05	.02	.01	.0
7	.02	.05	1.1	.72	.54	.24	.10	.20	.12	.02	.01	.0
8	.02	.05	8.9	.70	.51	.19	.10	.10	.04	.02	.01	.0
9	.02	.06	1.1	.56	.51	.18	.10	.14	.03	.02	.01	.0
10	.03	.03	.58	.63	.50	.19	.11	.09	.03	.02	.01	.0
11	.04	.03	.41	.93	.50	.17	.09	.07	.03	.04	.01	.0
12	.04	.03	.37	.52	.44	.17	.10	.07	.04	.07	.01	.01
13	.03	.48	.35	.47	.42	.18	.11	.15	.05	.07	.01	.0
14	.03	.07	.69	.44	.43	.19	.96	.05	.03	.09	.01	.0
15	.03	.04	.77	1.6	.42	.18	.13	.06	.02	.06	.02	.0
16	.04	.05	1.2	10	.40	.17	.09	.12	.02	.01	.01	.0
17	.04	2.4	.76	30	.43	.17	.09	.09	.03	.01	.01	.0
18	.03	.24	.57	4.1	.40	.20	.09	.06	.02	.03	.01	.0
19	.05	.12	.55	2.5	.39	.15	4.2	.04	.03	.01	.01	.01
20	.10	2.1	.55	1.8	.39	.15	.49	.04	.03	.01	.01	.0
21	.05	.31	.63	1.5	.39	.14	.19	.03	.03	.01	.01	.0
22	.10	.17	.58	1.3	.43	.14	.18	.03	.04	.01	.02	.01
23	.34	.13	.60	1.1	.41	.20	.58	.04	.05	.01	.01	.0
24	.03	.10	.59	1.1	.38	.20	.16	.03	.04	.02	.01	.0
25	.02	.18	.60	.88	.39	.13	.15	.03	.04	.03	.0	.0
26	.01	.08	.59	.87	.38	.14	.13	.03	.04	.01	.0	.01
27	1.3	.09	1.5	.84	.60	.13	.11	.03	.04	.01	.01	.0
28	1.1	.10	5.5	.83	1.2	.13	.12	.04	.03	.01	.01	.0
29	.20	.06	3.3	2.1	.87	.13	.13	.05	.02	.01	.0	.0
30	.10	.91	1.3	1.0	---	.13	.09	.03	.03	.01	.0	.00
31	.11	---	.72	.80	---	.13	---	.04	---	.01	.0	---
TOTAL	4.01	8.23	45.14	74.01	15.04	5.54	9.29	2.26	1.27	0.75	0.28	0.05
MEAN	.13	.27	1.46	2.39	.52	.18	.31	.073	.042	.024	.009	.002
MAX	1.3	2.4	8.9	30	1.2	.32	4.2	.20	.20	.09	.02	.01
MIN	.01	.03	.21	.44	.38	.13	.09	.03	.02	.01	.00	.00
AC-FT	8.0	16	90	147	30	11	18	4.5	2.5	1.5	.6	.1

CAL YR 1987 TOTAL 212.04 MEAN .58 MAX 47 MIN .01 AC-FT 421
WTR YR 1988 TOTAL 165.87 MEAN .45 MAX 30 MIN .00 AC-FT 329

SAN FRANCISQUITO CREEK BASIN

11164500 SAN FRANCISQUITO CREEK AT STANFORD UNIVERSITY, CA

LOCATION.--Lat 37°25'24", long 122°11'18", in San Francisquito Grant, Santa Clara County, Hydrologic Unit 18050003, at golf course on right bank 1.1 mi downstream from Los Trancos Creek, 1.1 mi west of Stanford University Post Office, and 5 mi downstream from Searsville Lake.

DRAINAGE AREA.--37.4 mi^2.

PERIOD OF RECORD.--October 1930 to September 1941, October 1950 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 115.75 ft above National Geodetic Vertical Datum of 1929. Recording raingage at 345 Middlefield Road in Menlo Park, 2.5 mi northeast of gage.

REMARKS.--Estimated daily discharges: Oct. 8-26. Records good. Flow slightly regulated by Searsville Lake, capacity, 952 acre-ft. Diversions of about 800 acre-ft each year above station to Los Trancos and Lagunita Canals for irrigation on Stanford University campus below station. Low flow affected by wastewater from Stanford Linear Accelerator.

AVERAGE DISCHARGE.--49 years, 20.1 ft^3/s, 14,560 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,560 ft^3/s, Dec. 22, 1955, gage height, 13.60 ft; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	0830	*712	*3.97				

No flow for several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.67	1.2	2.4	4.1	5.9	3.9	.92	2.0	.65	.03	.01	.01
2	.56	1.5	2.4	4.0	5.2	3.5	.82	2.5	.47	.04	.01	.01
3	.60	1.5	1.6	6.6	4.8	3.1	.85	2.7	.41	.04	.01	.04
4	.61	2.3	13	6.1	4.4	1.2	.91	2.6	.45	.03	.02	.04
5	.45	1.5	5.0	6.7	4.1	1.2	.81	2.6	.39	.03	.01	.05
6	.53	1.4	18	3.7	3.9	2.4	.77	2.8	.35	.03	.02	.04
7	.60	1.5	6.6	3.1	4.0	2.4	.75	2.7	.41	.03	.01	.04
8	.66	1.3	26	3.7	3.8	2.3	.78	2.4	.23	.01	.02	.06
9	1.0	.88	3.9	3.3	3.5	3.7	.75	2.1	.27	.01	.01	.06
10	.97	.86	2.6	3.1	3.5	3.0	.72	1.6	.22	.01	.0	.08
11	.95	.79	2.2	4.4	3.4	2.7	.67	1.5	.30	.01	.01	.04
12	.94	.92	1.8	3.0	3.4	2.5	.65	1.1	.27	.01	.02	.04
13	.94	1.6	1.5	2.5	2.9	2.1	.74	.64	.21	.02	.02	.04
14	1.4	.91	1.4	2.6	2.9	2.0	1.2	.64	.13	.03	.02	.04
15	1.2	.98	1.4	5.7	3.0	1.9	1.3	.60	.12	.0	.02	.04
16	1.1	.61	2.0	42	2.9	1.5	.92	.82	.14	.01	.02	.04
17	1.2	4.2	2.6	272	2.8	1.3	.87	1.1	.11	.01	.02	.06
18	1.0	2.5	1.5	67	2.6	1.3	.87	1.1	.13	.01	.01	.04
19	1.0	.93	1.3	26	2.5	1.3	9.1	1.1	.28	.0	.02	.06
20	1.1	6.5	1.2	13	2.3	1.2	4.2	.89	.39	.01	.03	.11
21	1.2	3.2	1.1	9.8	2.4	1.2	2.1	.81	.08	.02	.03	.05
22	1.3	1.1	1.1	8.0	2.6	1.2	1.6	.69	.04	.0	.03	.09
23	4.0	.85	1.1	6.6	2.4	1.1	2.6	.73	.06	.0	.03	.11
24	1.1	.75	1.1	6.2	2.8	1.1	2.0	.63	.04	.00	.02	.14
25	.85	.77	1.3	5.4	2.6	1.0	1.9	.64	.05	.01	.02	.11
26	.84	.87	1.6	4.6	2.5	1.1	1.6	.63	.04	.00	.02	.15
27	2.1	.84	1.4	4.7	2.5	1.1	1.4	.53	.06	.00	.03	.19
28	2.9	.89	18	4.5	6.1	1.0	1.6	.59	.03	.00	.04	.22
29	1.8	.90	22	7.5	4.4	.94	1.4	.53	.02	.0	.04	.32
30	1.0	1.6	10	9.5	---	1.0	1.1	.54	.03	.01	.05	.37
31	1.1	---	5.4	7.3	---	.84	---	.54	---	.0	.01	---
TOTAL	35.67	45.65	162.5	556.7	100.1	56.08	45.90	40.35	6.38	0.41	0.63	2.69
MEAN	1.15	1.52	5.24	18.0	3.45	1.81	1.53	1.30	.21	.013	.020	.090
MAX	4.0	6.5	26	272	6.1	3.9	9.1	2.8	.65	.04	.05	.37
MIN	.45	.61	1.1	2.5	2.3	.84	.65	.53	.02	.00	.00	.01
AC-FT	71	91	322	1100	199	111	91	80	13	.8	1.2	5.3
a	1.09	.95	2.99	2.67	.33	.02	.92	.24	.10	0	0	0

CAL YR 1987 TOTAL 1627.93 MEAN 4.46 MAX 606 MIN .00 AC-FT 3230
WTR YR 1988 TOTAL 1053.06 MEAN 2.88 MAX 272 MIN .00 AC-FT 2090

a Precipitation, in inches.

MATADERO CREEK BASIN

11166000 MATADERO CREEK AT PALO ALTO, CA

LOCATION.--Lat 37°25'18", long 122°08'04", in Rincon de San Francisquito Grant, Santa Clara County, Hydrologic Unit 18050003, on right bank on Ash Street 150 ft upstream from Lambert Avenue Bridge and 2.1 mi southeast of Palo Alto Post Office.

DRAINAGE AREA.--7.26 mi^2.

PERIOD OF RECORD.--July 1952 to current year.

REVISED RECORDS.--WDR CA-80-2: 1971-74, 1978, 1971-72(P). WDR CA-82-2: 1973-74, 1978(P).

GAGE.--Water-stage recorder. Datum of gage is 22.07 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 25, 1958, at site 150 ft downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--36 years, 2.38 ft^3/s, 1,720 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,500 ft^3/s, Jan. 24, 1983, gage height, 6.51 ft, from rating extended above 600 ft^3/s on basis of step-backwater computation at gage heights 7.63 and 8.00 ft, and slope-conveyance computations at 5.97 and 6.87 ft; maximum gage height, 9.88 ft, Dec. 23, 1955, site and datum then in use (backwater from culvert); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	0745	*405	*2.88				

No flow for several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.18	.10	1.4	.94	1.0	.63	.54	.22	.00	.08	.25	.04
2	.26	.09	.34	2.8	1.0	.91	.39	.29	.00	.09	.25	.06
3	.28	.21	.21	5.1	.96	.70	.39	.50	.00	.07	.25	.05
4	.15	.12	15	2.0	.92	.63	.85	.97	.00	.07	.25	.04
5	.18	.11	1.2	1.5	.92	.63	.66	.88	.00	.08	.37	.04
6	.22	.10	17	.99	.92	.63	.61	.99	.00	.03	.39	.03
7	.32	.07	4.4	.92	.92	.63	.51	1.4	.08	.10	.32	.02
8	.30	.04	15	.92	.95	.63	.45	.80	.00	.16	.30	.03
9	.30	.05	1.3	.84	1.1	.63	.36	.71	.07	.20	.30	.03
10	.24	.10	.79	.94	.96	.56	.28	.66	.07	.21	.21	.04
11	.22	.09	.62	1.3	.92	.63	.28	.38	.10	.14	.21	.03
12	.21	.10	.47	.70	.92	.70	.28	.55	.06	.05	.21	.02
13	.21	1.5	.45	.63	.92	.63	.40	.27	.05	.08	.21	.03
14	.74	.28	.48	.63	.92	.70	3.1	.36	.06	.11	.21	2.0
15	.44	.06	1.0	6.5	.92	.71	.78	.16	.05	.18	.21	.08
16	.40	.10	5.5	11	.92	.55	.43	2.3	.06	.16	.22	.05
17	.42	4.6	1.5	103	.85	.55	.47	.83	.05	.17	.21	.08
18	.25	.43	.73	8.9	.82	.58	.34	.27	.06	.17	.21	.05
19	.25	.26	.63	3.3	.85	.63	11	.39	.05	.21	.21	.06
20	.36	4.3	.59	2.3	.92	.70	2.0	.27	.07	.32	.20	.05
21	.45	.65	.57	1.7	.92	.53	.98	.56	.07	.17	.17	.05
22	.53	.17	.55	1.4	.92	.47	1.7	.21	.06	.17	.19	.04
23	3.7	.16	.55	1.3	.98	.47	4.7	.08	.14	.28	.17	.05
24	.31	.18	.42	1.3	1.1	.38	.80	.06	.12	.21	.17	.08
25	.07	.11	.30	1.3	.96	.40	.67	.06	.08	.20	.12	.04
26	.05	.17	.43	1.3	.92	.83	.62	.00	.31	.17	.07	.06
27	5.7	.26	3.7	1.3	2.1	.72	.47	.05	.05	.17	.09	.04
28	3.1	.45	14	1.2	3.8	.45	.46	.03	.04	.17	.06	.04
29	.77	.52	9.4	1.1	1.1	.42	.85	.00	.05	.19	.05	.05
30	.34	.62	2.6	1.1	---	.52	.47	.00	.17	.24	.03	.05
31	.14	---	1.2	1.1	---	.43	---	.00	---	.25	.04	---
TOTAL	21.09	16.00	102.33	169.31	31.41	18.58	35.84	14.25	1.92	4.90	6.15	3.33
MEAN	.68	.53	3.30	5.46	1.08	.60	1.19	.46	.064	.16	.20	.11
MAX	5.7	4.6	17	103	3.8	.91	11	2.3	.31	.32	.39	2.0
MIN	.05	.04	.21	.63	.82	.38	.28	.00	.00	.03	.03	.02
AC-FT	42	32	203	336	62	37	71	28	3.8	9.7	12	6.6

CAL YR 1987 TOTAL 584.81 MEAN 1.60 MAX 99 MIN .04 AC-FT 1160
WTR YR 1988 TOTAL 425.11 MEAN 1.16 MAX 103 MIN .00 AC-FT 843

11166710 ARROYO CALERO ABOVE CALERO RESERVOIR, NEAR NEW ALMADEN, CA
(Formerly published with Calero Reservoir as "at Calero Creek above Calero Reservoir")

LOCATION.--Lat 37°10'38", long 121°45'45", in Pueblo Lands of San Jose Grant, T.9 S., R.2 E., Santa Clara County, Hydrologic Unit 18050003, 3.2 mi east of New Almaden.

DRAINAGE AREA.--3.14 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: Water year 1986 to current year.
BIOLOGICAL DATA: Water year 1986 to current year. Prior to October 1987, published with Calero Reservoir (station 11166740) as "at Calero Creek above Calero Reservoir"

REMARKS.--Phytoplankton analyzed by Chadwick and Associates; laboratory not reviewed by U.S. Geological Survey.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS TOTAL (MG/L AS CACO3)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
AUG												
15...	1415	624	8.70	21.0	750	8.80	101	130	45	25	17	74

DATE	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
AUG											
15...	54	3	3.3	49	110	0.1	14	359	<0.01	0.20	0.19

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHOROUS TOTAL (MG/L AS P)	PHOS- PHOROUS DIS- SOLVED (MG/L AS P)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)
AUG											
15...	<0.01	0.02	0.18	0.2	0.2	0.4	0.08	0.06	0.06	170	5

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)
AUG							
15...	1415	10	2	<1	1	1	1

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, DIS- SOLVED (UG/L AS ZN)
AUG						
15...	<5	<0.1	1	3	<1	9

DATE	TIME	TUR- BID- ITY (FTU)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)
AUG				
15...	1415	0.7	10.0	1.20

< Actual value is known to be less than the value shown.

11166700 ARROYO CALERO ABOVE CALERO RESERVOIR, NEAR NEW ALMADEN, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA
WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

PHYTOPLANKTON

DATE	8/15/88	
TIME	1415	
ORGANISM	CELLS/ ML	CELL VOLUME UM^3/ML
BACILLARIOPHYTA (Diatoms)		
Order Centrales		
Cyclotella pseudostelligera	183	16000
Order Pennales		
Diatoma vulgare	14	21000
Navicula sp.	92	28000
Nitzschia sp.	28	3900
CHLOROPHYTA (Green algae)		
Kirchneriella contorta	14	980
Oocystis gigas	28	100000
Oocystis parva	7247	2200000
CYANOPHYTA (Blue-green algae)		
Anabaena spiroides	4723	710000
Chroococcus sp.	6605	400000
Schizothrix calcicola	750	5817
TOTAL CELLS/ML		19,684
TOTAL UM^3/ML		3,485,697
NUMBER OF SPECIES		10

GUADALUPE RIVER BASIN

11166740 CALERO RESERVOIR NEAR NEW ALMADEN, CA

LOCATION.--Lat 37°11'00", long 121°47'28", in San Vicente Grant, T.9 S., R.2 E., Santa Clara County, Hydrologic Unit 18050003, at center of dam of Arroyo Calero, 1.7 mi northeast of New Almaden, and 6 mi southeast of Edenvale.
DRAINAGE AREA.-- 6.93 mi^2.
PERIOD OF RECORD.--
MONTHLY CONTENTS: January 1936 to September 1985. Prior to October 1959, published in WSP 1735.
REVISED RECORDS.--WDR CA-79-2: Drainage area.
REMARKS.--Reservoir is formed by earthfill dam completed to crest elevation 482.55 ft in 1936 and raised to 483.5 ft in 1962. Capacity, 10,160 acre-ft between elevations 393.7 ft, center of outlet tunnel, and 483.5 ft, crest of spillway. Water released down Arroyo Calero for ground-water recharge by percolation and minor irrigation. Up to 100 ft^3/s diverted from Almaden Reservoir to Calero Reservoir at times. Beginning in 1986, up to 180 ft^3/s was diverted from San Luis Reservoir at times.

WATER-QUALITY RECORDS

371057121472501 CALERO RESERVOIR AT DAM NEAR, NEW ALMADEN, CA

LOCATION.--Lat 37°10'57", long 121°47'25", 300 ft above center of dam.
PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1978-79, 1984 to current year.
BIOLOGICAL DATA: Water years 1978-79, 1984 to current year.
REMARKS.--Lake elevation provided by Santa Clara Valley Water District; not reviewed by U.S. Geological Survey. Phytoplankton analyzed by Chadwick and Associates; laboratory not reviewed by U.S. Geological Survey.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	SAMPLING DEPTH (M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	LIGHT, ATTENUATION COEFFICIENT (ALPHA/METER)	ELEVATION ABOVE NGVD (FEET)
APR										
12...	0906	0.5	610	9.1	16.9	750	10.0	105	2.18	477.31
12...	0907	1.0	612	9.1	16.9	750	10.0	105	2.32	477.31
12...	0908	2.0	619	9.1	17.0	750	10.2	107	2.32	477.31
12...	0909	3.0	619	9.1	17.0	750	10.1	106	2.32	477.31
12...	0910	4.0	618	9.1	16.8	750	9.9	104	2.04	477.31
12...	0911	5.0	617	9.0	15.8	750	9.6	99	1.43	477.31
12...	0912	6.0	616	8.8	14.9	750	8.8	89	1.31	477.31
12...	0913	7.0	615	8.4	14.2	750	8.0	79	1.26	477.31
12...	0914	8.0	614	8.1	13.5	750	7.5	73	1.31	477.31
12...	0915	9.0	614	8.0	13.3	750	7.2	70	1.37	477.31
12...	0916	10.0	614	7.9	13.2	750	6.9	67	1.43	477.31
JUN										
15...	0916	0.5	616	8.9	20.6	750	9.8	111	4.32	479.74
15...	0917	1.0	618	8.9	20.6	750	9.8	111	4.32	479.74
15...	0918	2.0	618	8.9	20.6	750	9.6	109	4.43	479.74
15...	0919	3.0	618	8.9	20.6	750	9.6	109	4.56	479.74
15...	0920	4.0	619	8.9	20.6	750	9.7	110	4.56	479.74
15...	0921	5.0	619	8.9	20.6	750	9.6	109	4.56	479.74
15...	0922	6.0	619	8.5	18.1	750	6.8	73	3.87	479.74
15...	0923	7.0	618	8.2	17.1	750	5.2	55	2.77	479.74
15...	0924	8.0	616	8.0	16.6	750	4.1	43	2.32	479.74
15...	0925	9.0	615	7.9	16.4	750	3.5	36	2.11	479.74
15...	0926	10.0	614	7.8	16.1	750	3.5	36	2.39	479.74
15...	0927	11.0	614	7.7	16.0	750	3.2	33	2.46	479.74
15...	0928	12.0	616	7.7	15.9	750	3.2	33	2.32	479.74
15...	0929	13.0	617	7.6	15.7	750	2.9	30	2.62	479.74
JUL										
12...	0928	0.5	627	8.6	22.1	750	8.8	103	4.82	480.37
12...	0929	1.0	627	8.7	22.1	750	8.8	103	5.09	480.37
12...	0930	2.0	629	8.8	22.2	750	8.7	102	5.09	480.37
12...	0931	3.0	629	8.8	22.2	750	8.2	96	5.39	480.37
12...	0932	4.0	629	8.8	22.2	750	8.2	96	5.39	480.37
12...	0933	5.0	629	8.7	21.6	750	5.9	68	5.55	480.37
12...	0934	6.0	624	8.4	20.1	750	4.1	46	4.43	480.37
12...	0935	7.0	620	8.2	19.5	750	3.6	40	3.98	480.37
12...	0936	8.0	619	8.1	19.2	750	3.4	37	3.67	480.37
12...	0937	9.0	618	8.0	18.8	750	3.1	34	3.57	480.37
12...	0938	10.0	618	8.0	18.3	750	2.7	29	2.94	480.37
12...	0939	11.0	618	7.9	17.9	750	2.1	23	2.85	480.37
12...	0940	12.0	618	7.9	17.5	750	1.7	18	2.85	480.37
12...	0941	13.0	618	7.8	17.4	750	1.4	15	3.02	480.37
12...	0942	14.0	618	7.8	17.3	750	1.3	14	3.02	480.37
12...	0943	15.0	618	7.7	17.2	750	1.4	15	3.19	480.37
12...	0944	16.0	617	7.7	17.1	750	1.3	14	3.67	480.37
12...	0945	17.0	617	7.7	17.0	750	1.2	13	4.82	480.37
12...	0946	18.0	617	7.6	16.9	750	1.2	13	5.09	480.37
12...	0947	19.0	617	7.6	16.8	750	1.1	12	5.39	480.37
12...	0948	20.0	617	7.6	16.8	750	1.0	10	5.39	480.37
12...	0949	21.0	617	7.6	16.7	750	0.9	9	5.71	480.37
12...	0950	22.0	616	7.5	16.6	750	0.9	9	5.79	480.37
12...	0951	23.0	616	7.5	16.6	750	0.8	8	5.71	480.37
12...	0952	24.0	616	7.5	16.6	750	0.7	7	6.44	480.37

11166740 CALERO RESERVOIR NEAR ALMADEN, CA--Continued

371057121472501 CALERO RESERVOIR AT DAM--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	SAM-PLING DEPTH (M)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	LIGHT, ATTENU-ATION COEFFI-CIENT (ALPHA/METER)	ELEV-ATION ABOVE NGVD (FEET)
AUG										
16...	0915	0.5	641	8.5	20.5	750	8.3	94	2.32	481.09
16...	0916	1.0	640	8.5	21.5	750	8.3	96	1.98	481.09
16...	0917	2.0	639	8.5	21.5	750	8.3	96	2.18	481.09
16...	0918	3.0	640	8.5	21.6	750	8.3	96	2.11	481.09
16...	0919	4.0	640	8.5	21.6	750	8.3	96	2.11	481.09
16...	0920	5.0	641	8.5	21.6	750	8.1	94	2.04	481.09
16...	0921	6.0	641	8.5	21.6	750	8.1	94	1.98	481.09
16...	0922	7.0	641	8.5	21.6	750	7.9	91	1.91	481.09
16...	0923	8.0	636	8.3	21.3	750	5.0	57	1.91	481.09
16...	0924	9.0	630	8.0	21.1	750	3.9	45	1.43	481.09
16...	0925	10.0	628	7.9	21.0	750	3.2	37	1.20	481.09
16...	0926	11.0	625	7.8	20.6	750	2.3	26	1.10	481.09
16...	0927	12.0	624	7.7	20.4	750	1.3	15	1.20	481.09
16...	0928	13.0	624	7.7	20.1	750	0.8	9	1.43	481.09
16...	0929	14.0	624	7.6	20.0	750	0.6	7	1.54	481.09
16...	0930	15.0	622	7.6	20.0	750	0.6	7	1.54	481.09
16...	0931	16.0	622	7.5	19.9	750	0.6	7	1.91	481.09
16...	0932	17.0	622	7.5	19.9	750	0.6	7	2.39	481.09
16...	0933	18.0	621	7.5	19.8	750	0.6	7	2.11	481.09
16...	0934	19.0	621	7.5	19.7	750	0.5	6	3.28	481.09
16...	0935	20.0	621	7.4	19.7	750	0.5	6	3.38	481.09
16...	0936	21.0	621	7.4	19.7	750	0.5	6	3.67	481.09

DATE	TIME	SAM-PLING DEPTH (M)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
APR										
12...	0945	1.0	612	9.1	16.9	750	10.0	105	120	32
12...	1015	6.0	616	8.8	14.9	750	8.80	89	120	33
12...	1030	9.0	614	8.0	13.3	750	7.20	70	130	37
JUN										
15...	0955	1.0	618	8.9	20.6	750	9.80	111	130	37
15...	1030	7.0	618	8.2	17.1	750	5.20	55	130	36
15...	1050	12.0	606	7.7	15.9	750	3.20	33	130	35
JUL										
12...	1010	1.0	627	8.7	22.1	750	8.80	103	130	38
12...	1030	6.0	624	8.4	20.1	750	4.10	46	130	38
12...	1100	20.0	617	7.6	16.8	750	1.00	10	130	35
AUG										
16...	1010	1.0	640	8.5	21.5	750	8.30	96	140	40
16...	1100	8.0	636	8.3	21.3	750	5.00	57	130	38
16...	1120	20.0	621	7.4	19.7	750	0.50	6	140	40

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
APR										
12...	23	16	71	55	3	3.6	91	49	110	0.2
12...	23	16	70	54	3	3.6	90	52	110	0.2
12...	24	16	73	55	3	3.6	89	51	110	0.2
JUN										
15...	24	17	75	55	3	3.8	93	51	110	0.3
15...	24	17	74	55	3	3.5	94	51	110	0.3
15...	24	16	73	55	3	3.9	91	52	110	0.3
JUL										
12...	25	17	75	54	3	3.6	95	51	120	0.1
12...	25	17	72	53	3	3.6	95	49	110	<0.1
12...	24	16	72	55	3	3.6	91	49	110	<0.1
AUG										
16...	25	18	77	54	3	3.5	97	50	120	0.1
16...	26	17	74	54	3	3.5	97	49	110	0.1
16...	26	17	75	54	3	3.5	95	48	110	0.1

See footnote at end of table.

GUADALUPE RIVER BASIN

11166740 CALERO RESERVOIR NEAR ALMADEN, CA--Continued

371057121472501 - CALERO RESERVOIR AT DAM--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)
APR										
12...	15	343	--	--	<0.01	--	<0.10	--	0.02	<0.01
12...	15	344	--	--	<0.01	--	0.20	--	0.03	0.02
12...	15	347	--	--	<0.01	--	0.30	--	0.06	0.05
JUN										
15...	12	349	--	--	<0.01	--	<0.10	--	<0.01	0.03
15...	13	349	--	--	<0.01	--	0.10	--	0.05	0.05
15...	14	348	0.27	--	0.03	--	0.30	--	0.05	0.07
JUL										
12...	11	360	--	--	<0.01	--	<0.10	--	<0.01	<0.01
12...	11	345	--	--	<0.01	--	<0.10	--	<0.01	<0.01
12...	14	344	--	--	<0.01	--	0.40	--	0.01	0.01
AUG										
16...	11	363	--	--	<0.01	--	<0.10	--	<0.01	<0.01
16...	11	349	--	--	<0.01	--	0.20	--	<0.01	<0.01
16...	13	352	0.08	0.09	0.12	0.12	0.20	0.21	0.11	0.12

DATE	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)
APR										
12...	0.88	--	0.9	0.3	--	0.04	0.02	<0.01	180	6
12...	0.47	0.28	0.5	0.3	0.7	0.04	0.02	<0.01	190	6
12...	0.34	0.25	0.4	0.3	0.7	0.06	0.05	0.04	190	8
JUN										
15...	--	0.27	0.4	0.3	--	0.02	<0.01	<0.01	180	18
15...	0.35	0.35	0.4	0.4	0.5	0.02	<0.01	0.01	170	10
15...	0.35	0.33	0.4	0.4	0.7	0.04	0.03	0.04	180	15
JUL										
12...	--	--	0.6	0.3	--	0.02	0.01	<0.01	180	9
12...	--	--	0.6	<0.2	--	0.02	0.01	<0.01	170	9
12...	0.39	--	0.4	<0.2	0.8	0.10	0.08	0.07	170	10
AUG										
16...	--	--	0.8	<0.2	--	0.03	0.02	<0.01	180	8
16...	--	--	0.4	0.4	0.6	0.03	0.04	<0.01	180	4
16...	0.29	0.18	0.4	0.3	0.6	0.11	0.10	0.09	170	7

DATE	TIME	SAM-PLING DEPTH (M)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)
AUG							
16...	1120	20.0	20	2	<1	<1	<1

DATE	COPPER, DIS-SOLVED (UG/L AS CU)	LEAD, DIS-SOLVED (UG/L AS PB)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	ZINC, DIS-SOLVED (UG/L AS ZN)
AUG							
16...	1	<5	<0.1	1	3	<1	8

See footnote at end of table.

11166740 CALERO RESERVOIR NEAR ALMADEN, CA--Continued

371057121472501 CALERO RESERVOIR AT DAM--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
APR			
12...	1057	K1	K1
JUN			
15...	1105	K4	K1
JUL			
12...	1120	<2	K2

DATE	TIME	TRANS-PAR-ENCY (SECCHI DISK) (M)
APR		
12...	0940	2.10
JUN		
15...	0945	1.30
JUL		
12...	0900	1.25
AUG		
16...	1004	2.25

DATE	TIME	SAM-PLING DEPTH (M)	TUR-BID-ITY (NTU)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)
APR					
12...	0945	1.0	2.3	29.0	0.20
12...	1007	3.0	--	11.0	0.30
12...	1015	6.0	2.3	24.0	0.20
JUN					
15...	0955	1.0	4.3	15.0	1.80
15...	1015	3.0	4.2	12.0	1.50
15...	1025	5.0	4.2	9.70	1.20
15...	1050	12.0	2.0	2.90	0.60
JUL					
12...	1010	1.0	2.6	5.30	1.40
12...	1022	3.0	3.4	4.10	0.70
12...	1030	6.0	2.4	6.00	1.10
12...	1100	20.0	1.3	3.00	0.70
AUG					
16...	1010	1.0	0.9	2.90	0.70
16...	1030	3.0	0.5	1.40	0.30
16...	1055	5.0	1.4	0.90	0.20
16...	1100	8.0	1.0	1.00	0.20

< Actual value is known to be less than the value shown.

K Results based on colony counts outside acceptable range (non-ideal colony count).

GUADALUPE RIVER BASIN

11166740 CALERO RESERVOIR NEAR ALMADEN, CA--Continued

371057121472501 CALERO RESERVOIR AT DAM--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA

WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

PHYTOPLANKTON

DATE	4/12/88		4/12/88		4/12/88	
TIME	0945		1007		1015	
DEPTH (M)	1		3		6	
ORGANISM	CELLS/ ML	CELL VOLUME UM^3/ML	CELLS/ ML	CELL. VOLUME UM^3/ML	CELLS/ ML	CELL VOLUME UM^3/ML
BACILLARIOPHYTA (diatoms)						
Order Centrales						
Cyclotella stelligera	84	16128	--	--	113	21696
Stephanodiscus alpinus	--	--	169	4625361	56	1532664
Order Pennales						
Fragilaria crotonensis	--	--	--	--	115	27715
Fragilaria vaucheriae	17	4624	42	11424	8	2176
Navicula tripunctata	--	--	42	64638	8	12312
Navicula sp.	17	5049	--	--	23	6831
Nitzschia acuta ?	17	22440	--	--	8	10560
Nitzschia palea	34	18224	85	3060	--	--
Nitzschia tripunctata	--	--	--	--	8	12312
Surirella sp.	--	--	--	--	8	1800
CHLOROPHYTA (green algae)						
Chlamydomonas sp.	84	19824	--	--	169	39884
Chlorococcum sp.	--	--	169	30251	169	30251
Dictyosphaerium pulchellum	--	--	3714	122562	--	--
Oocystis sp.	--	--	--	--	338	47320
Schroederia judayi	253	7337	338	9802	675	19575
Selenastrum minutum	--	--	675	75600	338	37856
Sphaerocystis schroeteri	--	--	3376	833872	1351	333697
Tetraedron sp.	84	3024	--	--	--	--
CYANOPHYTA (blue-green algae)						
Aphanizomenon flos-aquae	12746	611808	19246	923808	22791	1093968
Aphanocapsa delicatissima	1941	1941	13506	13506	17557	17557
Aphanothece nidulans	5909	5909	24986	24986	25323	25323
Aphanothece saxicola	507	2028	5571	16713	7091	21273
Aphanothece sp.	--	--	3039	10637	5571	19499
Chroococcus dispersus	84	336	6753	27012	2195	8780
Chroococcus limneticus	--	--	1013	14182	338	4732
Chroococcus multicoloratus	--	--	1519	6076	--	--
Chroococcus sp.	--	--	--	--	1351	8106
Dactylococcopsis fascicularis	-	--	169	5070	--	--
Gloeothece linearis	--	--	338	5408	1182	18912
Microcystis sp.	16460	222210	12662	170937	15869	214232
Pseudoanabaena sp.	46763	420867	27518	247662	56724	510516
Synechococcus sp.	169	1014	5233	31398	507	3042
CRYPTOPHYTA (cryptomonads)						
Cryptomonas erosa	--	--	--	--	338	439400
Rhodomonas minuta	84	8064	169	16224	675	64800
TOTAL CELLS/ML		85,253		130,332		160,891
TOTAL ALGAL BIOMASS AS BIOVOLUME (UM^3/ML)		1,370,827		7,290,189		4,586,789
NUMBER OF SPECIES		17		23		29

11166740 CALERO RESERVOIR NEAR ALMADEN, CA--Continued

371057121472501 CALERO RESERVOIR AT DAM--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA

WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

PHYTOPLANKTON

DATE	6/15/88		6/15/88		6/15/88		6/15/88	
TIME	0955		1015		1025		1050	
DEPTH (M)	1		3		5		12	
ORGANISM	CELLS/ ML	CELL VOLUME UM^3/ML	CELLS/ ML	CELL. VOLUME UM^3/ML	CELLS/ ML	CELL VOLUME UM^3/ML	CELLS/ ML	CELL VOLUME UM^3/ML
BACILLARIOPHYTA (Diatoms)								
Order Centrales								
Stephanodiscus astrea	--	--	--	--	71	63900	17	15300
Order Pennales								
Achnanthes minutissima	--	--	71	5680	71	5680	--	--
Actinocyclus normanii	16	60480	32	120960	--	--	13	49140
Asterionella formosa	200	74320	48	17837	48	17837	46	17094
Fragilaria crotonensis	--	--	64	15424	176	42416	--	--
Nitzschia acicularis	48	13272	48	13272	--	--	--	--
Nitzschia closterium	100	30000	71	21300	16	4800	--	--
CHLOROPHYTA (Green algae)								
Actinastrum hantzschii	--	--	--	--	--	--	8	672
Ankistrodesmus falcatus	--	--	16	336	--	--	--	--
Chlamydomonas sp.	--	--	--	--	--	--	4	1008
Closterium sp.	--	--	--	--	16	4740	--	--
Coelastrum microporum	768	384000	384	192000	640	320000	--	--
Dictyosphaerium pulchellum	16300	815000	284	14200	7668	383126	559	27930
Elakotothrix viridis	--	--	16	1280	--	--	--	--
Eudorina sp.	512	307200	--	--	--	--	--	--
Oocystis gigas	600	2133000	64	227520	--	--	--	--
Oocystis parva	1000	296000	1420	420320	2485	736181	--	--
Pandorina morum	128	11648	1136	103376	512	46592	--	--
Pediastrum duplex	144	11520	--	--	--	--	--	--
Schroederia setigera	16	512	16	512	--	--	--	--
Sphaerocystis schroeteri	880	57200	426	27490	1988	128280	55	3549
CYANOPHYTA (Blue-green algae)								
Anabaena spiroides	5800	464000	848	67840	3337	266960	--	--
Aphanizomenon flos-aquae	6000	1800000	5680	1704000	2840	852000	--	--
Chroococcus dispersus	500	30000	--	--	284	17063	--	--
Schizothrix calcicola	3000	60000	1920	38400	1420	28400	42	840
PYRRHOPHYTA (Dinoflagellates)								
Ceratium hirundinella	--	--	16	505600	--	--	--	--
CRYPTOPHYTA (Cryptomonads)								
Cryptomonas sp.	--	--	16	7900	--	--	--	--
TOTAL CELLS/ML	36,012		12,576		21,572		744	
TOTAL ALGAL BIOMASS AS BIOVOLUME (UM^3/ML)	6,548,152		3,505,247		2,917,975		115,533	
NUMBER OF SPECIES	17		20		15		8	

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA

WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

PHYTOPLANKTON

DATE	7/12/88		7/12/88		7/12/88		7/12/88	
TIME	1010		1022		1030		1100	
DEPTH (M)	1		3		6		20	
ORGANISM	CELLS/ ML	CELL VOLUME UM^3/ML	CELLS/ ML	CELL VOLUME UM^3/ML	CELLS/ ML	CELL VOLUME UM^3/ML	CELLS/ ML	CELL VOLUME UM^3/ML
BACILLARIOPHYTA (Diatoms)								
Order Pennales								
Fragilaria crotonensis	587	470000	165	130000	847	680000	--	--
CHLOROPHYTA (Green algae)								
Coelastrum reticulatum	--	--	--	--	380	60000	560	8800
Oocystis gigas	182	670000	9678	3300000	201835	69000000	--	--
Oocystis parva	13620	4700000	55	200000	38	140000	1431	490000
Scenedesmus arculatus	85	1500	--	--	--	--	--	--
Sphaerocystis schroeteri	--	--	278	69000	113	28000	--	--
CYANCPHYTA (Blue-green algae)								
Anabaena sp.	--	--	--	--	2309	39000	--	--
Microcystis aeruginosa	--	--	1388	140000	3778	110000	--	--
Oscillatoria sp.	321	3100	--	--	--	--	--	--
Schizothrix calcicola	--	--	--	--	3610	28000	--	--
TOTAL CELLS/ML		14,795		11,564		212,910		1,991
TOTAL ALGAL BIOMAS AS BIOVOLUME (UM^3/ML)		5,844,600		3,839,000		70,085,000		498,800
NUMBER OF SPECIES		5		5		8		2

11166740 CALERO RESERVOIR NEAR ALMADEN, CA--Continued

371057121472501 CALERO RESERVOIR AT DAM--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA

WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

PHYTOPLANKTON

DATE	8/16/88		8/16/88		8/16/88		8/16/88	
TIME	1010		1030		1055		1100	
DEPTH (M)	1		3		5		8	
ORGANISM	CELLS/ ML	CELL VOLUME UM^3/ML	CELLS/ ML	CELL VOLUME UM^3/ML	CELLS/ ML	CELL VOLUME UM^3/ML	CELLS/ ML	CELL VOLUME UM^3/ML
BACILLARIOPHYTA (Diatoms)								
Order Centrales								
Actinocyclus normanii	--	--	--	--	7	14000	7	16000
Cyclotella pseudostelligera	14	1300	--	--	7	630	--	--
Stephanodiscus astraea	--	--	--	--	14	32000	--	--
Order Pennales								
Asterionella formosa	87	44000	--	--	44	22000	--	--
Fragilaria crotonensis	109	87000	94	75000	116	93000	72	58000
Nitzschia acicularis	7	2100	--	--	--	--	--	--
Nitzschia gracilis	--	--	--	--	7	7000	7	7000
Nitzschia sp.	22	3100	--	--	7	980	7	980
Synedra ulna	--	--	--	--	--	--	14	14000
CHLOROPHYTA (Green algae)								
Ankistrodesmus falcatus	7	630	7	630	--	--	--	--
Carteria sp.	7	1800	--	--	--	--	--	--
Coelastrum reticulatum	280	44000	--	--	--	--	145	23000
Elakotothrix viridis	29	8100	43	12000	--	--	--	--
Oocystis gigas	667	2400000	601	2200000	478	1700000	667	2400000
Oocystis parva	130	39000	319	96000	283	85000	225	67000
Pandorina sp.	--	--	--	--	--	--	29	4400
Scenedesmus acuitiformis	29	4400	7	4200	--	--	--	--
Scenedesmus arcuatus	58	7500	--	--	--	--	--	--
Scenedesmus quadricauda	7	1000	--	--	--	--	--	--
Schroederia setigera	--	--	--	--	7	1100	--	--
Sphaerocystis schroeteri	638	130000	290	58000	406	81000	--	--
Staurastrum sebaldi	--	--	--	--	7	1300	--	--
Tetraedron minimum	--	--	7	1300	--	--	--	--
CYANOPHYTA (Blue-green algae)								
Anabaena spiroides	29	4400	275	27000	--	--	--	--
Anabaena sp.	145	22000	--	--	--	--	72	7200
Schizothrix calcicola	220	8800	7	54	--	--	--	--
CRYPTOPHYTA (Cryptomonads)								
Cryptomonas erosa	--	--	29	14000	--	--	14	7000
TOTAL CELLS/Ml		2,485		1,679		1,383		1,259
TOTAL ALGAL BIOMASS AS BIOVOLUME (UM^3/ML)		2,809,130		2,468,184		2,038,010		2,604,580
NUMBER OF SPECIES		18		11		12		11

11166900 ALAMITOS CREEK NEAR NEW ALMADEN, CA

LOCATION.--Lat 37°13'21", long 121°51'00", in Pueblo Lands of San Jose Grant, Santa Clara County, on right bank at Greystone bridge, 1.1 mi downstream from Arroyo Calero, 3.4 mi southwest of Edenvale, and 3.5 mi northwest of New Almaden.

DRAINAGE AREA.--31.8 mi^2.

PERIOD OF RECORD.--

CHEMICAL DATA: Water years 1985 to current year.

SEDIMENT DATA: Water years 1985, 1987 to current year.

REMARKS.--Bed-material samples were divided into two fractions prior to analysis. Chemical and particle-size analyses are representative of the sample fraction which was finer than 2.0 mm. Streamflow data provided by Santa Clara Valley Water District, not reviewed by U.S. Geological Survey.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (FTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	HARDNESS TOTAL (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3
NOV 17...	1130	1.1	534	8.40	15.0	2.9	755	10.0	100	12	230	37
JUN 16...	1000	1.0	694	8.00	18.0	3.4	--	--	--	<10	320	46
JUL 13...	1030	1.4	701	8.20	20.0	2.7	755	10.2	114	13	270	74
AUG 17...	1045	1.4	656	8.40	18.0	2.2	755	11.2	120	<10	310	50

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	CARBONATE WATER WH FET FIELD MG/L AS CO3	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
NOV 17...	31	36	29	22	0.9	1.7	--	189	33	45	0.1
JUN 16...	43	52	28	16	0.7	1.4	--	276	40	47	0.2
JUL 13...	43	40	49	28	1	2.3	--	198	42	80	0.2
AUG 17...	40	50	33	19	0.8	1.2	2	256	39	55	0.1

DATE	BROMIDE DISSOLVED (MG/L AS BR)	IODIDE, DISSOLVED (MG/L AS I)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3, TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
NOV 17...	0.056	0.005	23	317	0.43	0.03	0.01	0.90	0.89	0.03	0.02
JUN 16...	--	--	25	402	0.55	<0.01	--	1.00	--	<0.01	0.03
JUL 13...	--	--	22	398	0.54	<0.01	--	0.50	--	<0.01	0.02
AUG 17...	0.140	0.005	26	406	0.55	<0.01	<0.01	<0.10	0.69	0.03	<0.01

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	BORON, DISSOLVED (UG/L AS B)	IRON, DISSOLVED (UG/L AS FE)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
NOV 17...	0.5	0.5	1.4	0.05	0.05	0.03	150	21	7.4	6.7	--
JUN 16...	0.2	<0.2	1.2	0.02	0.01	<0.01	200	<3	--	2.0	0.4
JUL 13...	0.3	0.3	0.8	0.04	0.03	0.03	180	<3	--	3.0	0.3
AUG 17...	0.3	0.2	--	0.03	0.02	<0.01	170	5	--	1.9	0.7

See footnote at end of table.

11166900 ALAMITOS CREEK NEAR NEW ALMADEN, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)
NOV									
17...	1130	<10	1	--	83	<1	--	2	--
AUG									
17...	1045	<10	1	8	100	<1	<1	2	80

DATE	COBALT, DISSOLVED (UG/L AS CO)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, DISSOLVED (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY DISSOLVED (UG/L AS HG)
NOV											
17...	1	--	4	--	--	<5	--	6	4	--	<0.1
AUG											
17...	<1	<50	1	20	17000	<5	<10	9	2	370	<0.1

DATE	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)
NOV										
17...	--	<1	4	<1	--	1.0	230	2	4	--
AUG										
17...	95	<1	3	<1	<1	<1.0	290	3	5	60

< Actual value is known to be less than the value shown.

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE WATER (DEG C)	BED MAT. FALL DIAM.DW % FINER THAN .002 MM	BED MAT. FALL DIAM. % FINER THAN .004 MM	BED MAT. FALL DIAM.DW % FINER THAN .008 MM	BED MAT. FALL DIAM.DW % FINER THAN .016 MM
AUG							
17...	1045	1.4	18.0	6	7	9	14

DATE	BED MAT. FALL DIAM.DW % FINER THAN .031 MM	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM
AUG							
17...	21	22	23	24	33	63	100

11167500 GUADALUPE CREEK AT GUADALUPE, CA

LOCATION.--Lat 37°13'02", long 121°54'35", in SW 1/4 sec.19, T.8 S, R.1 E., Santa Clara County, Hydrologic Unit 18050003, on left bank 0.1 mi downstream from small left-bank tributary, 0.5 mi northwest of Guadalupe.

DRAINAGE AREA.--12.8 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1980 to current year.
SEDIMENT DATA: Water years 1985 to current year.

REMARKS.--Bed-material samples were divided into two fractions prior to analysis. Chemical and particle-size analyses are representative of the sample fraction which was finer than 2.0 mm. Streamflow data provided by Santa Clara Valley Water District; not reviewed by U.S. Geological Survey.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (FTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
NOV											
17...	1015	0.60	666	8.50	12.5	0.6	755	10.3	98	11	310
JUN											
16...	0915	1.6	587	8.00	15.0	5.9	--	--	--	<10	280
JUL											
13...	0945	1.4	591	8.20	18.0	3.8	755	9.40	100	15	290
AUG											
17...	0945	0.70	571	8.40	16.0	0.5	755	9.60	98	<10	290

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	CAR-BONATE WATER WH FET FIELD MG/L AS CO3	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
NOV											
17...	4	52	44	28	16	0.7	1.6	--	308	47	12
JUN											
16...	9	48	39	24	16	0.6	1.4	--	272	36	15
JUL											
13...	20	48	41	25	16	0.7	1.3	--	269	34	16
AUG											
17...	15	40	45	30	19	0.8	1.3	2	271	36	18

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	BROMIDE DIS-SOLVED (MG/L AS BR)	IODIDE, DIS-SOLVED (MG/L AS I)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
NOV											
17...	0.1	<0.010	0.007	12	382	0.52	<0.01	<0.01	<0.10	<0.10	0.01
JUN											
16...	0.2	--	--	12	339	0.46	<0.01	--	<0.10	--	<0.01
JUL											
13...	0.2	--	--	11	338	0.46	<0.01	--	<0.10	--	0.01
AUG											
17...	0.1	0.022	0.010	10	348	0.47	<0.01	<0.01	<0.10	<0.10	<0.01

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)
NOV											
17...	0.03	0.4	0.2	0.01	0.01	<0.01	570	15	3.6	3.8	--
JUN											
16...	0.04	<0.2	<0.2	0.02	0.02	0.02	490	<3	--	2.8	0.3
JUL											
13...	0.02	<0.2	<0.2	0.03	0.02	0.01	520	<3	--	3.0	0.8
AUG											
17...	<0.01	0.4	0.4	0.03	0.03	<0.01	570	11	--	2.7	0.4

See footnote at end of table.

11167500 GUADALUPE CREEK AT GUADALUPE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	BROMIDE DISSOLVED (MG/L AS BR)	IODIDE, DISSOLVED (MG/L AS I)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)
NOV 17...	1015	<0.01	0.007	<10	3	--	82	<1	--	<1	--
AUG 17...	0945	0.022	0.01	<10	3	16	79	<1	<10	1	160

DATE	COBALT, DISSOLVED (UG/L AS CO)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, DISSOLVED (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY DISSOLVED (UG/L AS HG)
NOV 17...	1	--	2	--	--	<5	--	11	9	--	<0.1
AUG 17...	<1	<50	1	6	26000	<5	10	15	4	660	<0.1

DATE	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)
NOV 17...	--	<1	10	<1	--	1.0	340	2	6	--
AUG 17...	70	<1	6	<1	<1	<1.0	280	1	3	120

< Actual value is known to be less than the value shown.

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE WATER (DEG C)	BED MAT. FALL DIAM.DW % FINER THAN .002 MM	BED MAT. FALL DIAM. % FINER THAN .004 MM	BED MAT. FALL DIAM.DW % FINER THAN .008 MM	BED MAT. FALL DIAM.DW % FINER THAN .016 MM
AUG 17...	0945	0.70	16.0	33	40	44	61

DATE	BED MAT. FALL DIAM.DW % FINER THAN .031 MM	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM
AUG 17...	76	81	92	96	98	99	100

GUADALUPE RIVER BASIN

11168660 LOS GATOS CREEK AT LARK AVENUE, AT LOS GATOS, CA

LOCATION.--Lat 37°15'07", long 121°57'48", in Rinconada de Los Gatos Grant, Santa Clara County, Hydrologic Unit 18050003 at bridge on Lark Avenue, 1,800 ft downstream from Vasona Dam, and 2 mi northeast of Los Gatos Post Office.

DRAINAGE AREA.--43.3 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: Water year 1979 to current year.
SEDIMENT DATA: Water year 1985 to current year.

REMARKS.--Bed material samples were divided into two fractions prior to analysis. Chemical and particle-size analyses are representative of the sample fraction which was finer than 2.0 mm. Streamflow data provided by Santa Clara Valley Water District; not reviewed by U.S. Geological Survey.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
NOV 17...	0800	1.4	598	8.00	14.5	3.5	755	10.4	103	10	290
JUN 16...	0815	1.3	678	7.80	19.0	1.6	--	--	--	<10	310
JUL 13...	0800	2.2	680	7.70	22.0	1.2	755	6.00	69	19	300
AUG 17...	0830	1.2	616	7.60	19.0	5.0	755	3.80	41	18	260

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 17...	76	69	28	22	14	0.6	3.0	212	86	19	0.2
JUN 16...	92	72	32	26	15	0.7	2.8	220	120	23	0.2
JUL 13...	97	66	34	29	17	0.7	3.0	208	110	26	0.2
AUG 17...	83	48	35	31	20	0.8	3.0	182	99	30	0.2

DATE	BROMIDE DIS-SOLVED (MG/L AS BR)	IODIDE, DIS-SOLVED (MG/L AS I)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)
NOV 17...	0.036	0.030	10	366	0.50	0.02	<0.01	0.10	0.12	0.07	0.08
JUN 16...	--	--	14	422	0.57	<0.01	--	<0.10	--	0.03	0.07
JUL 13...	--	--	17	410	0.56	<0.01	--	<0.10	--	0.06	0.09
AUG 17...	0.072	0.035	21	379	0.51	0.05	0.06	0.20	0.24	0.49	0.49

See footnote at end of table.

11168660 LOS GATOS CREEK AT LARK AVENUE, AT LOS GATOS, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	BORON, DISSOLVED (UG/L AS B)	IRON, DISSOLVED (UG/L AS FE)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
NOV											
17...	0.8	0.7	0.9	0.05	0.05	0.02	90	15	6.5	6.2	--
JUN											
16...	0.4	0.3	--	0.04	0.03	0.03	80	<3	--	3.8	0.9
JUL											
13...	0.4	<0.2	--	0.06	0.06	0.04	90	<3	--	4.5	0.4
AUG											
17...	1.2	1.0	1.4	0.09	0.06	0.03	110	12	--	6.0	1.0

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, DISSOLVED (UG/L AS CO)
NOV										
17...	0800	10	1	--	76	<1	--	100	--	<1
AUG										
17...	0830	<10	3	11	78	<1	<10	3	40	<1

DATE	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, DISSOLVED (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY DISSOLVED (UG/L AS HG)
NOV										
17...	--	3	--	--	<5	--	7	65	--	<0.1
AUG										
17...	<50	1	20	17000	<5	10	7	380	3500	<0.1

DATE	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)
NOV										
17...	--	4	4	<1	--	<1.0	400	1	14	--
AUG										
17...	0.13	4	<1	<1	<1	<1.0	390	2	9	90

< Actual value is known to be less than the value shown.

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE WATER (DEG C)	BED MAT. FALL DIAM.DW % FINER THAN .002 MM	BED MAT. FALL DIAM. % FINER THAN .004 MM	BED MAT. FALL DIAM.DW % FINER THAN .008 MM	BED MAT. FALL DIAM.DW % FINER THAN .031 MM
AUG							
17...	0830	1.2	19.0	11	16	19	39

DATE	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM
AUG						
17...	40	44	48	54	69	100

11169000 GUADALUPE RIVER AT SAN JOSE, CA

LOCATION.--Lat 37°20'04", long 121°53'54", Santa Clara County, Hydrologic Unit 18050003, on right bank and 150 ft upstream from St. John Street bridge, one block below Santa Clara Avenue, and 100 ft downstream from Los Gatos Creek.

DRAINAGE AREA.--146 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1929 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Prior to 1945, published as Guadalupe Creek at San Jose.

REVISED RECORDS.--WSP 1315-B: 1943(M), 1945(M), 1949(M). WSP 1929: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 72.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Apr. 15 to May 13. Records good except those for estimated daily discharges, which are poor. Flow regulated by Lexington Reservoir 12 mi upstream and by Calero, Almaden, and Guadalupe Reservoirs, and Lake Elsman (combined usable capacity, about 42,000 acre-ft), with water released during summer for percolation in spreading basins on tributaries. During current year, 3,450 acre-ft were diverted by San Jose Water Works for urban use.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,150 ft^3/s, Apr. 2, 1958, gage height, 16.55 ft; no flow several days in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,470 ft^3/s, Jan. 17, gage height, 4.09 ft; minimum daily, 0.42 ft^3/s, Apr. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	23	28	17	20	21	15	9.7	7.2	6.7	3.7	4.8
2	16	37	17	22	20	17	15	8.3	7.1	6.0	4.0	5.0
3	16	18	16	38	20	17	15	3.8	6.8	5.9	4.1	5.1
4	15	16	165	26	20	17	15	1.7	7.0	5.2	4.4	4.7
5	11	21	31	22	20	16	15	3.4	6.8	5.4	4.3	4.8
6	17	18	243	19	20	16	14	6.6	7.0	6.7	4.3	5.6
7	15	16	50	21	20	16	12	22	10	6.6	3.9	5.7
8	15	16	95	19	19	16	7.9	7.3	10	5.0	4.2	4.8
9	15	16	24	17	17	16	5.1	7.1	6.9	7.7	4.2	5.1
10	15	15	17	18	18	16	4.9	6.5	6.8	26	4.2	5.1
11	14	16	16	19	18	16	7.1	3.5	6.2	26	3.9	4.8
12	11	16	16	18	18	16	7.4	4.3	6.2	22	4.0	4.8
13	12	36	16	19	18	16	8.9	7.1	6.2	4.9	3.1	5.0
14	16	16	16	18	18	16	18	7.6	6.7	4.6	3.8	5.1
15	28	15	23	135	18	16	9.5	7.4	6.7	4.6	4.0	5.1
16	17	16	56	102	18	16	9.6	11	6.4	5.2	3.8	4.8
17	15	53	27	483	18	16	8.7	11	6.2	5.1	4.4	5.0
18	15	19	16	86	18	16	8.7	7.3	6.4	4.8	4.3	4.8
19	15	17	16	44	18	16	64	7.2	5.8	4.5	4.5	4.9
20	15	47	16	37	18	15	44	7.2	5.1	4.2	4.7	4.9
21	15	24	16	38	18	15	2.1	7.2	6.5	5.0	4.6	4.6
22	14	22	20	28	18	16	6.9	6.6	7.1	4.5	4.4	4.5
23	33	19	16	25	19	16	44	7.1	6.2	4.9	4.8	4.4
24	15	18	16	23	19	15	8.0	6.6	6.4	4.1	4.8	4.6
25	14	16	16	21	18	15	5.2	6.1	6.4	4.0	4.6	4.6
26	14	16	17	21	18	16	1.5	6.0	6.1	4.6	4.6	4.5
27	92	16	17	20	23	16	.42	6.5	6.2	4.6	4.8	4.6
28	121	16	157	20	53	15	2.7	7.3	5.0	4.3	4.7	4.7
29	17	16	142	21	35	16	6.5	7.2	4.8	3.0	4.7	4.5
30	16	17	24	24	---	16	8.2	7.2	6.2	4.5	4.3	4.6
31	22	---	19	20	---	15	---	7.3	---	3.8	4.4	---
TOTAL	682	627	1364	1441	595	498	390.32	225.1	198.4	214.4	132.5	145.5
MEAN	22.0	20.9	44.0	46.5	20.5	16.1	13.0	7.26	6.61	6.92	4.27	4.85
MAX	121	53	243	483	53	21	64	22	10	26	4.8	5.7
MIN	11	15	16	17	17	15	.42	1.7	4.8	3.0	3.1	4.4
AC-FT	1350	1240	2710	2860	1180	988	774	446	394	425	263	289

CAL YR 1987 TOTAL 9799.8 MEAN 26.8 MAX 679 MIN 8.8 AC-FT 19440
WTR YR 1988 TOTAL 6513.22 MEAN 17.8 MAX 483 MIN .42 AC-FT 12920

11169000 GUADALUPE RIVER AT SAN JOSE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1979 to current year.
SEDIMENT DATA: Water years 1985 to current year.

REMARKS.--Bed-material samples were divided into two fractions prior to analysis. Chemical and particle-size analyses are representative of the sample fraction which was finer than 2.0 mm.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	HARDNESS TOTAL (MG/L AS CACO3)
NOV											
17...	1400	47	518	8.10	16.0	17	755	8.60	88	29	220
JUN											
16...	1245	6.6	709	8.40	22.0	5.0	--	--	--	29	320
JUL											
13...	1245	4.9	752	8.20	21.5	2.3	755	9.60	110	38	340
AUG											
17...	1215	4.3	759	8.30	21.0	5.0	760	7.90	89	47	350

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
NOV											
17...	43	43	28	28	21	0.8	2.2	180	45	32	0.1
JUN											
16...	50	54	44	35	19	0.9	1.7	266	72	33	0.2
JUL											
13...	68	61	46	39	20	0.9	1.7	274	72	37	0.2
AUG											
17...	66	61	48	39	19	0.9	1.5	285	80	39	0.2

DATE	BROMIDE DISSOLVED (MG/L AS BR)	IODIDE, DISSOLVED (MG/L AS I)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
NOV											
17...	0.038	0.006	15	310	0.42	0.05	0.04	1.70	1.70	0.09	0.11
JUN											
16...	--	--	14	414	0.56	0.03	--	1.40	--	0.04	0.06
JUL											
13...	--	--	20	442	0.60	0.03	--	1.30	--	0.13	0.14
AUG											
17...	0.120	0.003	22	470	0.64	0.02	0.02	1.60	1.60	0.03	0.03

DATE	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	BORON, DISSOLVED (UG/L AS B)	IRON, DISSOLVED (UG/L AS FE)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
NOV											
17...	1.1	0.5	2.8	0.13	0.12	0.10	140	42	16	11	--
JUN											
16...	0.3	0.3	1.7	0.07	0.05	0.04	160	<3	--	2.2	1.0
JUL											
13...	0.3	0.3	1.6	0.11	0.10	0.08	150	<3	--	2.6	0.4
AUG											
17...	0.4	0.3	2.0	0.06	0.05	0.03	160	6	--	2.5	0.7

See footnote at end of table.

11169000 GUADALUPE RIVER AT SAN JOSE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, DISSOLVED (UG/L AS CO)
NOV										
17...	1400	<10	1	--	82	<1	--	2	--	<1
AUG										
17...	1215	<10	1	5	110	<1	2	<1	60	2

DATE	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, DISSOLVED (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY DISSOLVED (UG/L AS HG)
NOV										
17...	--	5	--	--	<5	--	9	13	--	<0.1
AUG										
17...	<50	1	120	23000	<5	100	16	12	390	<0.1

DATE	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)
NOV										
17...	--	1	5	1	--	<1.0	400	2	12	--
AUG										
17...	4.0	1	3	3	2	<1.0	610	4	10	290

< Actual value is known to be less than the value shown.

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE WATER (DEG C)	BED MAT. FALL DIAM.DW % FINER THAN .002 MM	BED MAT. FALL DIAM. % FINER THAN .004 MM	BED MAT. FALL DIAM.DW % FINER THAN .008 MM	BED MAT. FALL DIAM.DW % FINER THAN .016 MM
AUG							
17...	1215	4.3	21.0	19	30	37	48

DATE	BED MAT. FALL DIAM.DW % FINER THAN .031 MM	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM
AUG							
17...	55	60	64	69	81	87	100

11169500 SARATOGA CREEK AT SARATOGA, CA

LOCATION.--Lat 37°15'18", long 122°02'18", in Quito Grant, Santa Clara County, Hydrologic Unit 18050003, on right bank on upstream side of private road bridge, 0.5 mi southwest of Saratoga, and 0.7 mi downstream from diversion dam.

DRAINAGE AREA.--9.22 mi^2.

PERIOD OF RECORD.--October 1933 to current year. Prior to October 1951, published as Campbell Creek at Saratoga.
REVISED RECORDS.--WSP 1445: 1940, 1952(M).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 500 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 6, 1968, at site 40 ft downstream at different datum.

REMARKS.--No estimated daily discharges. Records fair except for daily discharges less than 0.20 ft^3/s, which are poor. Water is diverted for municipal use by San Jose Water Works at diversion dam upstream from station. Low flows partially regulated by Lake McKenzie 8 mi upstream, usable capacity, 184 acre-ft.

AVERAGE DISCHARGE (adjusted for diversion).--55 years, 10.4 ft^3/s, 7,530 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,730 ft^3/s, Dec. 22, 1955, gage height, 6.40 ft, site and datum then in use, from rating curve extended above 510 ft^3/s on basis of slope-area measurement of peak flow; maximum gage height, 7.03 ft, Jan. 24, 1983; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 110 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	0730	*109	*3.64				

Minimum daily, 0.01 ft^3/s, Sept. 2, 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.63	1.2	3.5	2.4	.39	.91	.26	.64	.13	.10	.03
2	.17	.54	1.8	3.3	1.6	.43	.91	.31	.59	.13	.08	.01
3	.22	.57	1.3	2.8	.31	.40	.91	.31	.56	.12	.06	.02
4	.17	.41	5.8	3.1	1.9	.36	.94	.31	.49	.14	.07	.05
5	.09	.43	3.0	3.4	.26	.37	.91	.17	.55	.16	.09	.04
6	.08	.48	21	3.1	.31	.41	.86	.26	.59	.12	.10	.03
7	.08	.48	6.9	2.1	.31	.33	.80	.64	.60	.09	.11	.03
8	.14	.50	11	1.4	.36	.31	.74	.31	.50	.09	.08	.03
9	.24	.53	4.6	1.1	.38	.25	.72	.17	.58	.10	.08	.01
10	.29	.59	2.9	.93	.38	.30	.75	.14	.58	.11	.06	.03
11	.30	.53	2.1	1.1	.32	.32	.72	.14	.55	.12	.08	.04
12	.30	.46	1.8	.78	.33	.39	.72	.17	.52	.10	.11	.04
13	.33	.68	1.7	.72	.37	.38	.81	.14	.50	.10	.11	.04
14	.32	.82	1.5	.84	.31	.40	.81	.14	.44	.09	.16	.06
15	.29	.67	1.8	2.0	.38	.40	.81	.17	.37	.13	.15	.08
16	.28	.63	3.5	5.5	.31	.30	.81	.17	.38	.12	.19	.10
17	.29	1.1	2.9	42	.31	.48	.81	.26	.37	.12	.14	.08
18	.29	.91	2.1	16	.36	.27	.81	.17	.42	.09	.09	.05
19	.25	.67	1.9	9.1	.37	.35	8.7	.14	.35	.08	.07	.04
20	.30	1.7	1.7	3.4	.31	.32	7.0	.10	.28	.11	.08	.03
21	.35	1.1	1.6	1.8	.51	.23	2.2	.10	.30	.16	.11	.04
22	.39	.80	1.6	1.1	.54	.39	1.8	.13	.32	.20	.16	.08
23	.75	.75	1.5	.71	.56	1.3	3.9	.41	.29	.17	.17	.10
24	.64	.71	1.4	.51	.35	1.0	.36	.59	.31	.13	.16	.12
25	.53	.56	1.4	.51	.50	1.0	.26	.52	.26	.12	.12	.16
26	.47	.54	1.4	.55	.44	1.1	.21	.54	.27	.08	.05	.16
27	.71	.61	1.6	.48	.58	1.1	.17	.61	.21	.08	.06	.13
28	1.1	.63	11	.33	1.4	1.1	.17	.69	.17	.10	.19	.14
29	.63	.59	13	.56	.81	1.1	.14	.82	.15	.07	.21	.07
30	.53	.72	7.0	1.7	---	1.0	.21	.72	.16	.08	.10	.06
31	.55	---	4.4	2.5	---	1.0	---	.67	---	.10	.06	---
TOTAL	11.18	20.34	126.4	116.92	17.27	17.48	39.87	10.28	12.30	3.54	3.40	1.90
MEAN	.36	.68	4.08	3.77	.60	.56	1.33	.33	.41	.11	.11	.063
MAX	1.1	1.7	21	42	2.4	1.3	8.7	.82	.64	.20	.21	.16
MIN	.08	.41	1.2	.33	.26	.23	.14	.10	.15	.07	.05	.01
AC-FT	22	40	251	232	34	35	79	20	24	7.0	6.7	3.8
a	0	1.8	0	105	78	47	33	54	0	0	0	0

CAL YR 1987 TOTAL 520.46 MEAN 1.43 MAX 68 MIN .06 AC-FT 1030
WTR YR 1988 TOTAL 380.88 MEAN 1.04 MAX 42 MIN .01 AC-FT 755

a Diversion, in acre-feet, for municipal use, provided by San Jose Water Works.

COYOTE CREEK BASIN

11169920 ANDERSON LAKE NEAR MADRONE, CA

LOCATION.--Lat 37°09'56", long 121°37'42", in southeast corner of Laguna Seca Grant, Santa Clara County, at center of dam on Coyote Creek, 2.5 mi northeast of Madrone.

DRAINAGE AREA.-- 195 mi^2.

PERIOD OF RECORD.--
MONTHLY CONTENTS: December 1950 to September 1984. Prior to October 1959, published in WSP 1735.
REMARKS.--Reservoir is formed by earth and rockfill dam completed in 1950. Capacity, 91,280 acre-ft between elevations 439 ft, invert of outlet tunnel, and 625.0 ft, crest of spillway. Water released down Coyote Creek for irrigation and ground-water recharge by percolation.

WATER-QUALITY RECORDS

370958121373901 ANDERSON LAKE AT DAM, NEAR MADRONE, CA

LOCATION--Lat 37°09'58", long 121°37'39", 300 ft above left side of dam.
PERIOD OF RECORD.--
CHEMICAL DATA: October 1986 to September 1987.
BIOLOGICAL DATA: October 1986 to September 1987.
REMARKS.--Lake elevation provided by Santa Clara Valley Water District; not reviewed by the U.S. Geological Survey. Phytoplankton analyzed by Chadwick and Associates; laboratory not reviewed by the U.S. Geological Survey.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	SAMPLING DEPTH (M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	ELEVATION ABOVE NGVD (FEET)
MAR 1987									
18...	0934	0.50	337	8.6	12.0	750	9.8	93	570.13
18...	0935	1.0	337	8.6	12.0	750	9.9	93	570.13
18...	0936	2.0	337	8.6	12.0	750	9.7	92	570.13
18...	0937	3.0	337	8.6	12.0	750	9.8	92	570.13
18...	0938	4.0	336	8.5	12.0	750	9.8	92	570.13
18...	0939	5.0	336	8.5	12.0	750	9.5	89	570.13
18...	0940	6.0	336	8.5	12.0	750	9.4	88	570.13
18...	0941	7.0	336	8.5	11.5	750	9.2	86	570.13
18...	0942	8.0	336	8.4	11.5	750	9.2	86	570.13
18...	0943	9.0	336	8.4	11.5	750	9.1	85	570.13
18...	0944	10.0	336	8.4	11.5	750	9.1	85	570.13
18...	0945	11.0	335	8.4	11.5	750	8.8	82	570.13
18...	0946	12.0	335	8.3	11.5	750	8.8	82	570.13
18...	0947	13.0	335	8.2	11.0	750	8.2	76	570.13
18...	0948	14.0	335	8.2	11.0	750	8.3	76	570.13
18...	0949	15.0	334	8.1	11.0	750	8.1	74	570.13
18...	0950	16.0	334	8.1	10.5	750	8.1	74	570.13
18...	0951	17.0	334	8.1	10.5	750	8.1	74	570.13
18...	0952	18.0	334	8.1	10.5	750	7.9	72	570.13
18...	0953	19.0	333	8.1	10.5	750	8.2	75	570.13
18...	0954	20.0	333	8.1	10.5	750	8.0	73	570.13
18...	0955	21.0	333	8.1	10.5	750	8.0	73	570.13
18...	0956	22.0	332	8.1	10.5	750	7.9	72	570.13
18...	0957	23.0	331	8.1	10.5	750	7.9	72	570.13
18...	0958	24.0	330	8.1	10.5	750	7.9	72	570.13
18...	0959	25.0	332	8.1	10.0	750	8.3	75	570.13
18...	1000	26.0	329	8.1	10.0	750	8.0	72	570.13
18...	1001	27.0	329	8.1	10.0	750	7.9	71	570.13
18...	1002	28.0	331	8.1	10.0	750	8.1	73	570.13
18...	1003	29.0	330	8.1	10.0	750	7.9	71	570.13
18...	1004	30.0	330	8.1	10.0	750	7.9	71	570.13
18...	1005	32.0	327	8.1	10.5	750	7.9	72	570.13
18...	1006	34.0	326	8.0	10.0	750	7.7	70	570.13
18...	1007	35.0	326	8.0	10.5	750	7.8	71	570.13

11169920 ANDERSON LAKE NEAR MADRONE, CA--Continued

370958121373901 ANDERSON LAKE AT DAM--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	SAMPLING DEPTH (M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	ELEVATION ABOVE NGVD (FEET)
JUN 1987									
17...	1107	0.50	379	8.5	21.0	765	8.8	99	539.71
17...	1108	1.0	378	8.5	21.0	765	8.7	97	539.71
17...	1109	2.0	378	8.4	21.0	765	8.6	96	539.71
17...	1110	3.0	377	8.4	20.5	765	8.5	95	539.71
17...	1111	4.0	376	8.4	20.5	765	8.5	95	539.71
17...	1112	5.0	377	8.4	20.5	765	8.4	93	539.71
17...	1113	6.0	377	8.3	20.5	765	8.2	91	539.71
17...	1114	7.0	363	7.9	19.5	765	5.8	63	539.71
17...	1115	8.0	365	7.9	18.5	765	5.4	58	539.71
17...	1116	9.0	359	7.8	18.5	765	5.4	57	539.71
17...	1117	10.0	356	7.8	18.5	765	5.4	57	539.71
17...	1118	11.0	351	7.8	18.0	765	5.1	54	539.71
17...	1119	12.0	352	7.7	17.5	765	5.0	52	539.71
17...	1120	13.0	345	7.7	17.5	765	4.6	48	539.71
17...	1121	14.0	340	7.6	17.0	765	4.2	43	539.71
17...	1122	15.0	335	7.6	16.5	765	3.7	38	539.71
17...	1123	16.0	331	7.6	16.0	765	3.6	36	539.71
17...	1124	17.0	326	7.6	15.5	765	3.6	36	539.71
17...	1125	18.0	318	7.6	15.0	765	3.7	37	539.71
17...	1126	19.0	318	7.6	15.0	765	3.7	37	539.71
17...	1127	20.0	316	7.6	15.0	765	3.7	37	539.71
17...	1128	21.0	312	7.6	15.0	765	3.7	36	539.71
17...	1129	22.0	311	7.6	14.5	765	3.7	36	539.71
17...	1130	23.0	311	7.6	14.5	765	3.7	36	539.71
17...	1131	24.0	309	7.6	14.5	765	3.7	36	539.71
17...	1132	25.0	309	7.4	14.5	765	3.7	36	539.71
17...	1133	26.0	309	7.3	14.5	765	3.6	35	539.71
17...	1134	27.0	309	7.2	14.5	765	3.6	35	539.71
JUL									
15...	1012	0.50	411	8.6	22.5	745	7.6	90	527.07
15...	1013	1.0	411	8.6	22.5	745	7.4	87	527.07
15...	1014	2.0	411	8.6	22.0	745	7.4	87	527.07
15...	1015	3.0	412	8.6	22.0	745	7.3	86	527.07
15...	1016	4.0	414	8.6	22.0	745	7.2	84	527.07
15...	1017	5.0	414	8.4	21.0	745	6.0	69	527.07
15...	1018	6.0	414	8.3	20.5	745	5.5	63	527.07
15...	1019	7.0	415	8.3	20.5	745	5.5	63	527.07
15...	1020	8.0	415	8.2	20.5	745	5.0	57	527.07
15...	1021	9.0	415	8.2	20.0	745	4.7	53	527.07
15...	1022	10.0	415	8.1	20.0	745	4.7	53	527.07
15...	1023	11.0	414	8.1	20.0	745	4.1	46	527.07
15...	1024	12.0	412	8.0	19.5	745	3.7	41	527.07
15...	1025	13.0	411	8.0	19.0	745	3.2	35	527.07
15...	1026	14.0	407	7.9	18.5	745	2.7	30	527.07
15...	1027	15.0	405	7.9	18.5	745	2.6	28	527.07
15...	1028	16.0	404	7.9	18.5	745	2.5	27	527.07
15...	1029	17.0	403	7.9	18.0	745	2.3	25	527.07
15...	1030	18.0	401	7.8	17.5	745	2.2	24	527.07
15...	1031	19.0	400	7.8	17.5	745	1.9	20	527.07
15...	1032	20.0	399	7.8	17.5	745	1.7	18	527.07
15...	1033	21.0	399	7.7	17.5	745	1.7	18	527.07
15...	1034	22.0	399	7.7	17.5	745	1.6	17	527.07
15...	1035	23.0	399	7.7	17.0	745	1.5	16	527.07

COYOTE CREEK BASIN

11169920 ANDERSON LAKE NEAR MADRONE, CA--Continued

370958121373901 ANDERSON LAKE AT DAM--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	SAMPLING DEPTH (M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	ELEVATION ABOVE NGVD (FEET)
AUG 1987									
13...	1003	0.50	436	8.5	23.0	745	8.0	95	511.14
13...	1004	1.0	438	8.5	23.0	745	8.0	95	511.14
13...	1005	2.0	438	8.5	23.0	745	7.9	94	511.14
13...	1006	3.0	440	8.5	23.0	745	7.8	93	511.14
13...	1007	4.0	441	8.5	23.0	745	7.8	93	511.14
13...	1008	5.0	441	8.5	22.5	745	7.8	93	511.14
13...	1009	6.0	442	8.4	22.5	745	7.4	88	511.14
13...	1010	7.0	437	8.0	21.5	745	4.1	48	511.14
13...	1011	8.0	439	8.0	21.5	745	4.0	46	511.14
13...	1012	9.0	437	8.0	21.0	745	3.9	45	511.14
13...	1013	10.0	437	8.0	21.0	745	4.1	47	511.14
13...	1014	11.0	437	8.0	21.0	745	4.1	47	511.14
13...	1015	12.0	435	7.9	20.5	745	4.1	47	511.14
13...	1016	13.0	433	7.9	20.5	745	3.9	45	511.14
13...	1017	14.0	433	7.9	20.5	745	3.7	42	511.14
13...	1018	15.0	434	7.9	20.5	745	3.3	38	511.14
13...	1019	16.0	434	7.8	20.5	745	3.1	35	511.14
13...	1020	17.0	434	7.8	20.5	745	3.0	34	511.14
13...	1021	18.0	434	7.8	20.5	745	2.9	33	511.14
13...	1022	19.0	436	7.8	20.5	745	2.6	30	511.14

DATE	TIME	SAMPLING DEPTH (M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3
MAR 1987										
18...	1040	1.0	337	8.6	12.0	750	9.9	93	140	12
18...	1140	13.0	335	8.2	11.0	750	8.2	76	140	14
18...	1200	25.0	332	8.1	10.0	750	8.3	75	140	13
JUN										
17...	1300	1.0	378	8.5	21.0	765	8.7	97	160	15
17...	1346	7.0	363	7.9	19.5	765	5.8	63	160	12
17...	1426	16.0	331	7.6	15.5	765	3.6	36	160	12
JUL										
15...	1125	1.0	411	8.6	22.5	745	7.4	87	170	13
15...	1205	8.0	415	8.2	20.5	745	5.0	57	170	15
15...	1235	22.0	399	7.7	17.5	745	1.6	17	170	17
AUG										
13...	1100	1.0	438	8.5	23.0	745	8.0	95	180	12
13...	1125	8.0	439	8.0	21.5	745	4.0	46	180	10
13...	1135	17.0	434	7.8	20.5	745	3.0	34	180	12

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
MAR 1987									
18...	33	15	16	19	0.6	1.7	132	33	10
18...	33	15	16	19	0.6	1.7	130	34	10
18...	33	15	17	20	0.6	1.7	131	34	10
JUN									
17...	38	17	18	19	0.6	1.9	150	39	11
17...	37	17	18	19	0.6	1.8	150	39	11
17...	36	16	17	19	0.6	1.8	144	37	10
JUL									
15...	39	18	18	18	0.6	2.1	159	39	16
15...	39	18	19	19	0.7	1.9	157	39	18
15...	39	18	18	18	0.6	1.9	155	39	19
AUG									
13...	40	20	20	19	0.7	2.3	170	41	12
13...	39	19	19	19	0.6	2.2	166	40	12
13...	39	19	19	19	0.6	2.2	164	40	12

11169920 ANDERSON LAKE NEAR MADRONE, CA--Continued

370958121373901 ANDERSON LAKE AT DAM--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987 (NOT PREVIOUSLY PUBLISHED)

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
MAR 1987									
18...	0.20	10	200	<0.010	<0.100	--	0.020	<0.010	0.78
18...	0.20	11	200	<0.010	0.100	--	0.030	0.020	0.57
18...	0.20	11	200	<0.010	<0.100	--	0.040	0.040	0.46
JUN									
17...	0.20	10	230	<0.010	<0.100	--	<0.010	<0.010	--
17...	0.20	10	220	<0.010	<0.100	--	0.010	0.020	0.79
17...	0.20	11	220	<0.010	<0.100	--	0.030	<0.010	0.87
JUL									
15...	0.30	9.6	240	<0.010	<0.100	--	<0.010	<0.010	--
15...	0.30	9.5	240	<0.010	<0.100	--	0.010	0.020	0.19
15...	0.20	10	240	<0.010	<0.100	<0.100	0.020	0.010	0.18
AUG									
13...	0.20	9.9	250	<0.010	<0.100	--	0.010	<0.010	0.59
13...	0.20	9.7	240	<0.010	<0.100	--	<0.010	<0.010	--
13...	0.20	9.8	240	0.010	<0.100	--	0.020	<0.010	0.98

DATE	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)
MAR 1987									
18...	--	0.80	1.0	--	0.020	<0.010	<0.010	90	<3
18...	0.38	0.60	0.40	0.70	0.010	0.010	<0.010	80	30
18...	0.26	0.50	0.30	--	0.010	<0.010	<0.010	90	<3
JUN									
17...	--	<0.20	0.40	--	0.040	0.010	0.010	110	5
17...	0.38	0.80	0.40	--	0.040	0.010	<0.010	100	5
17...	--	0.90	0.20	--	0.050	0.010	<0.010	100	12
JUL									
15...	--	0.50	0.50	--	0.020	0.030	0.030	100	<3
15...	0.48	0.20	0.50	--	0.020	0.010	0.010	90	4
15...	0.49	0.20	0.50	--	0.030	0.010	<0.010	90	<3
AUG									
13...	--	0.60	0.60	--	0.030	0.010	<0.010	110	5
13...	--	0.50	0.40	--	0.030	0.010	<0.010	120	4
13...	--	1.0	0.70	--	0.030	0.010	<0.010	110	5

DATE	TIME	SAM-PLING DEPTH (M)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)
JUL 1987							
15...	1235	22.0	<10	2	<1	<1	<1

DATE	COPPER, DIS-SOLVED (UG/L AS CU)	LEAD, DIS-SOLVED (UG/L AS PB)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	ZINC, DIS-SOLVED (UG/L AS ZN)
JUL 1987							
15...	1	<5	<0.1	1	<1	<1	5

See footnote at end of table.

COYOTE CREEK BASIN

11169920 ANDERSON LAKE NEAR MADRONE, CA--Continued

370958121373901 ANDERSON LAKE AT DAM--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987 (NOT PREVIOUSLY PUBLISHED)

DATE	TIME	TRANS-PAR-ENCY (SECCHI DISK) (M)
MAR 1987		
18...	1038	1.8
JUN		
17...	1241	1.0
JUL		
15...	1048	0.90
AUG		
13...	1032	0.63

DATE	TIME	SAM-PLING DEPTH (M)	TUR-BID-ITY (NTU)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)
MAR 1987					
18...	1040	1.0	0.40	4.80	0.700
18...	1117	2.0	0.50	4.90	0.800
18...	1125	3.0	0.50	5.30	0.800
JUN					
17...	1300	1.0	3.1	1.10	0.100
17...	1325	2.0	3.5	1.80	0.200
17...	1335	3.0	2.5	1.80	0.200
JUL					
15...	1125	1.0	1.8	2.00	0.200
15...	1145	2.0	3.3	2.10	<0.100
15...	1155	3.0	3.1	2.20	0.300
AUG					
13...	1100	1.0	7.2	3.90	0.500
13...	1115	2.0	4.7	3.00	0.400

< Actual value is known to be less than the value shown.

11169920 ANDERSON LAKE NEAR MADRONE, CA--Continued

370958121373901 ANDERSON LAKE AT DAM--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA
WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
(NOT PREVIOUSLY PUBLISHED)

PHYTOPLANKTON

DATE	3/18/87		3/18/87		3/18/87	
TIME	1040		1117		1125	
DEPTH (M)	1		2		3	
ORGANISM	CELLS/ML	CELL VOLUME UM^3/ML	CELLS/ML	CELL VOLUME UM^3/ML	CELLS/ML	CELL VOLUME UM^3/ML
BACILLARIOPHYTA (Diatoms)						
Order Centrales						
Cyclotella ocellata	284	98636	568	197273	114	39593
Cyclotella stelligera 1	227	106861	114	183363	--	--
Cyclotella stelligera 2	3238	69171	2954	63104	1931	41250
Melosira lirata	1250	79441	1363	86622	568	36098
Rhizosolenia eriensis	2272	940607	2556	1058185	966	399923
Stephanodiscus niagarae	7	15545	14	31089	57	126578
Order Pennales						
Fragilaria vaucheriae	--	--	7	1688	--	--
Nitzschia sigmoidea	--	--	7	95314	--	--
Synedra fasciculata	--	--	57	140539	--	--
CHLOROPHYTA (Green algae)						
Chlorella sp.	795	16360	284	5844	--	--
Chlorococcum sp.	--	--	57	6446	57	10237
Closterium sp.	114	27945	19	3657	--	--
Crucigenia tetrapedia	--	--	--	--	341	3351
Franceia ovalis	--	--	57	11460	--	--
Nephrocytium agardhianum	--	--	57	3450	341	20639
Oocystis pusilla	227	26517	625	73010	57	6659
Oocystis sp.	57	1518	--	--	--	--
Scenedesmus quadricauda	57	1610	57	1610	114	3220
CHRYSOPHYTA (Golden-brown algae)						
Kephyrion sp.	--	--	57	1074	--	--
Mallomonas sp.	--	--	--	--	57	16416
CYANOPHYTA (Blue-green algae)						
Aphanocapsa delicatissima	11133	5829	9429	4937	10906	5710
Aphanothece sp.	--	--	1022	1070	1590	2814
Chroococcus dispersus	5112	52654	11814	49485	10565	165650
Chroococcus limneticus	1931	39738	--	--	625	12862
Dactylococcopsis fascicularis	1420	6740	2329	11055	2954	14021
Synechococcus sp.	3465	10395	9826	29478	13689	41067
EUGLENOPHYTA (Euglenoids)						
Euglena sp.	14	26572	19	36062	--	--
Trachelomonas sp.	28	69885	19	47422	--	--
CRYPTOPHYTA (Cryptomonads)						
Cryptomonas sp. 1	--	--	114	284530	--	--
Cryptomonas sp. 2	7952	288783	9258	336211	7100	257842
Rhodomonas minuta	--	--	--	--	57	5472
TOTAL CELLS/ML		39,583		52,683		52,089
TOTAL ALGAL BIOMASS AS BIOVOLUME (UM^3/ML)		1,884,807		2,763,978		1,209,402
NUMBER OF SPECIES		20		26		19

11169920 ANDERSON LAKE NEAR MADRONE, CA--Continued

370958121373901 ANDERSON LAKE AT DAM--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA
WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
(NOT PREVIOUSLY PUBLISHED)

PHYTOPLANKTON

DATE	6/17/87		6/17/87		6/17/87	
TIME	1300		1325		1355	
DEPTH (M)	1		2		3	
ORGANISM	CELLS/ML	CELL VOLUME UM^3/ML	CELLS/ML	CELL VOLUME UM^3/ML	CELLS/ML	CELL VOLUME UM^3/ML
BACILLARIOPHYTA (Diatoms)						
Order Centrales						
Cyclotella ocellata	54	19260	85	30317	511	182258
Cyclotella stelligera	198	30479	--	--	57	8774
Melosira lirata	15	502	--	--	57	1908
Melosira sp.	--	--	114	24066	--	--
Stephanodiscus niagarae	10	154000	--	--	--	--
Stephanodiscus sp.	7	481	--	--	--	--
Order Pennales						
Achnanthes sp.	61	10980	227	40860	568	102240
Nitzschia acicularis	145	38011	--	--	57	14942
Nitzschia linearis	5	20160	--	--	--	--
Nitzschia paleacea	5	628	--	--	--	--
Synedra delicatissima	2	8308	--	--	57	236778
Synedra sp.	10	3967	57	22612	--	--
CHLOROPHYTA (Green algae)						
Chlamydomonas sp.	--	--	57	4276	57	4276
Chlorella sp.	625	6441	--	--	2045	21075
Chlorococcum humicola	227	12340	85	4621	568	102007
Coccomyxa sp.	57	525	--	--	1306	12035
Coelastrum sp.	--	--	341	24470	--	--
Franceia sp.	--	--	--	--	57	9348
Gloeocystis sp.	1022	115582	--	--	--	--
Kirchneriella lunaris	3067	63215	1136	23415	4828	99512
Scenedesmus quadricauda	114	19414	57	9707	114	19414
Scenedesmus serratus	738	10819	--	--	1761	25817
Selenastrum minutum	--	--	--	--	114	8280
Green filament	511	34247	--	--	568	38067
CYANOPHYTA (Blue-green algae)						
Aphanocapsa delicatissima	5850	3063	11275	5903	46633	24416
Aphanothece sp.	8634	15281	--	--	284	503
Chroococcus dispersus	1761	18148	710	7317	1591	16396
Dactylococcopsis acicularis	114	1519	170	2265	511	6809
Dactylococcopsis fascicularis	682	3237	1306	6199	1647	7817
Synechococcus sp.	57	136	114	272	1193	2850
EUGLENOPHYTA (Euglenoids)						
Trachelomonas sp.	--	--	--	--	57	157414
PYRRHOPHYTA (Dinoflagellates)						
Peridinium sp.	--	28	--	123087	--	--
CRYPTOPHYTA (Cryptomonads)						
Rhodomonas minuta	--	57	--	5529	--	--
TOTAL CELLS/ML		23,971		15,819		64,641
TOTAL ALGAL BIOMASS AS BIOVOLUME (UM^3/ML)		590,743		334,916		1,102,936
NUMBER OF SPECIES		25		16		23

COYOTE CREEK BASIN

11169920 ANDERSON LAKE NEAR MADRONE, CA--Continued

370958121373901 ANDERSON LAKE AT DAM--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA
WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
(NOT PREVIOUSLY PUBLISHED)

PHYTOPLANKTON

DATE	7/15/87		7/15/87		7/15/87	
TIME	1125		1145		1155	
DEPTH (M)	1		2		3	
ORGANISM	CELLS/ML	CELL VOLUME UM^3/ML	CELLS/ML	CELL VOLUME UM^3/ML	CELLS/ML	CELL VOLUME UM^3/ML
BACILLARIOPHYTA (Diatoms)						
Order Centrales						
Cyclotella ocellata	170	46486	682	186491	57	15586
Cyclotella stelligera	398	38260	57	5479	284	27301
Melosira lirata	85	8178	--	--	--	--
Stephanodiscus sp.	--	--	57	79462	--	--
Order Pennales						
Achnanthes deflexa	341	60152	170	29988	625	110250
Nitzschia acicularis	--	--	--	--	114	19419
CHLOROPHYTA (Green algae)						
Carteria sp.	--	--	57	28216	57	28216
Chlorella sp.	454	6418	398	5626	227	3201
Chlorococcum sp.	170	9241	568	11701	170	3502
Coccomyxa minor	--	--	682	2796	114	467
Coelastrum microporum	--	--	--	--	256	68627
Crucigenia tetrapedia	--	--	227	30872	--	--
Gloeocystis sp.	--	--	--	--	454	81538
Kirchneriella lunaris	284	1647	795	4611	454	2633
Oocystis sp.	--	--	--	--	114	7250
Pediastrum tetras	--	--	--	--	199	35738
Scenedesmus serratus	3181	167639	1931	101764	3522	185609
Tetraedron minimum	--	--	341	8927	57	1492
CYANOPHYTA (Blue-green algae)						
Aphanocapsa delicatissima	22095	39108	14654	25938	23345	41321
Aphanothece sp.	86563	86563	16472	16472	24424	24424
Chroococcus dispersus	568	5850	1761	24895	1136	11700
Dactylococcopsis acicularis	966	4250	1931	8496	1420	6248
Dactylococcopsis fascicularis	1931	6179	852	2726	795	2624
Synechococcus sp.	18574	55722	13064	39303	16642	49926
EUGLENOPHYTA (Euglenoids)						
Euglena sp.	--	--	--	--	28	65520
CRYPTOPHYTA (Cryptomonads)						
Cryptomonas sp.	57	20437	--	--	--	--
Rhodomonas minute	--	--	57	5472	57	5472
TOTAL CELLS/ML		135,837		54,756		74,551
TOTAL ALGAL BIOMASS AS BIOVOLUME (UM^3/ML)		556,130		619,235		798,064
NUMBER OF SPECIES		15		19		23

11169920 ANDERSON LAKE NEAR MADRONE, CA--Continued

370958121373901 ANDERSON LAKE AT DAM--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA
WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
(NOT PREVIOUSLY PUBLISHED)

PHYTOPLANKTON

DATE	8/13/87		8/13/87	
TIME	1100		1115	
DEPTH (M)	1		2	
ORGANISM	CELLS/ML	CELL VOLUME UM^3/ML	CELLS/ML	CELL VOLUME UM^3/ML
BACILLARIOPHYTA (Diatoms)				
Order Centrales				
Cyclotella sp.	114	20181	170	30094
Melosira lirata	114	5802	--	--
Order Pennales				
Achnanthes deflexa	199	30826	312	48330
Nitzschia acicularis	28	6412	--	--
Nitzschia paleacea	--	--	57	24350
Nitzschia sp.	--	--	28	4144
CHLOROPHYTA (Green algae)				
Chlamydomonas sp.	28	3167	57	6446
Chlorella sp.	85	876	596	6142
Chlorococcum sp.	369	12365	--	--
Chlorogonium sp.	28	5118	57	10419
Coccomyxa minor	--	--	1108	11745
Coelastrum sphaericum	284	5844	341	7017
Franceia ovalis	--	--	28	4398
Kirchneriella lunaris	227	2827	369	4595
Nephrocytium sp.	142	2379	--	--
Oocystis sp.	398	19838	--	--
Phacotus lenticularis	369	66268	57	10237
Scenedesmus serratus	1846	27063	1250	18325
Selenastrum minutum	57	2149	85	3204
Tetraedron gracile	85	1068	--	--
Tetraedron minimum	57	1741	--	--
Treubaria sp.	28	938	57	1910
CHRYSOPHYTA (Golden-brown algae)				
Dinobryon divergens	28	10775	--	--
Kephyrion sp.	28	1102	--	--
CYANOPHYTA (Blue-green algae)				
Anabaena sp.	170	6791	--	--
Aphanocapsa delicatissima	1136	1028	1704	1542
Aphanothece microscopica ?	227	3328	256	3753
Aphanothece saxicola	1874	1298	568	393
Aphanothece sp.	398	951	3578	8548
Chroococcus dispersus	--	--	114	2346
Chroococcus dispersus var. minor	369	949	511	1314
Chroococcus limneticus	312	6615	--	--
Dactylococcopsis fascicularis	. 454	1951	1079	4637
Oscillatoria limnetica	--	--	511	9279
Synechococcus sp.	227	1855	227	1855
CRYPTOPHYTA (Cryptomonads)				
Rhodomonas minuta	57	5472	--	--
TOTAL CELLS/ML		9,738		13,120
TOTAL ALGAL BIOMASS AS BIOVOLUME (UM^3/ML)		256,977		225,023
NUMBER OF SPECIES		30		24

11176000 ARROYO MOCHO NEAR LIVERMORE, CA

LOCATION.--Lat 37°37'35", long 121°42'13", in NW 1/4 SE 1/4 sec.36, T.3 S., R.2 E., Alameda County, Hydrologic Unit 18050004, on right bank 40 ft downstream from Mines Road bridge, 2.4 mi upstream from small right-bank tributary, and 5.2 mi southeast of Livermore.

DRAINAGE AREA.--38.2 mi^2.

PERIOD OF RECORD.--January 1912 to September 1930, October 1963 to current year. Records for water year 1914 incomplete; yearly estimate and monthly discharge only for some months, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 746.49 ft above National Geodetic Vertical Datum of 1929. January 1912 to October 1914, at present site at different datum. November 1914 to Sept. 30, 1930, at site 1 mi upstream at different datum.

REMARKS.--Estimated daily discharges: Oct. 1 to Dec. 16. Records good except those for estimated discharges, which are fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--43 years, 5.21 ft^3/s, 3,770 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge recorded, 2,250 ft^3/s, Jan. 24, 1983, gage height, 8.80 ft, from rating curve extended above 600 ft^3/s on basis of slope-area measurement of peak flow; maximum gage height, 10.44 ft, Feb. 19, 1986, from floodmarks; no flow for parts of most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 23, 1955, discharge 1,880 ft^3/s, by slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 90 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	1630	*47	*5.82				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.07	.84	.83	.93	.20	.11	.05	.00	.00	.00
2	.00	.00	.08	.74	.82	.90	.20	.11	.05	.00	.00	.00
3	.00	.00	.05	.79	.74	.81	.20	.11	.05	.00	.00	.00
4	.00	.00	.04	.90	.74	.71	.20	.11	.05	.00	.00	.00
5	.00	.00	.08	.96	.72	.66	.18	.11	.05	.00	.00	.00
6	.00	.00	.25	1.0	.66	.57	.18	.10	.05	.00	.00	.00
7	.00	.00	1.2	.98	.66	.52	.18	.10	.05	.00	.00	.00
8	.00	.00	1.7	.90	.66	.50	.18	.10	.05	.00	.00	.00
9	.00	.00	1.5	.83	.66	.46	.18	.10	.05	.00	.00	.00
10	.00	.00	.90	.78	.66	.46	.17	.10	.05	.00	.00	.00
11	.00	.00	.62	.74	.66	.40	.16	.10	.05	.00	.00	.00
12	.00	.00	.52	.74	.66	.37	.16	.09	.04	.00	.00	.00
13	.00	.00	.40	.72	.59	.37	.18	.09	.04	.00	.00	.00
14	.00	.00	.37	.67	.59	.37	.16	.09	.04	.00	.00	.00
15	.00	.00	.39	.95	.59	.37	.16	.09	.04	.00	.00	.00
16	.00	.00	.45	1.7	.56	.33	.16	.09	.04	.00	.00	.00
17	.00	.00	.52	20	.52	.33	.14	.09	.03	.00	.00	.00
18	.00	.00	.55	17	.52	.30	.14	.08	.02	.00	.00	.00
19	.00	.00	.59	5.0	.52	.29	.15	.08	.02	.00	.00	.00
20	.00	.00	.59	2.2	.52	.29	.16	.08	.02	.00	.00	.00
21	.00	.00	.59	1.4	.52	.29	.18	.08	.02	.00	.00	.00
22	.00	.00	.59	1.2	.52	.29	.20	.08	.02	.00	.00	.00
23	.00	.00	.68	1.1	.52	.29	.18	.07	.02	.00	.00	.00
24	.00	.00	.71	1.0	.52	.26	.19	.07	.01	.00	.00	.00
25	.00	.00	.64	.92	.52	.26	.20	.06	.01	.00	.00	.00
26	.00	.00	.58	.92	.52	.26	.17	.06	.01	.00	.00	.00
27	.00	.00	.52	.91	.52	.26	.16	.06	.01	.00	.00	.00
28	.00	.00	.97	.83	.63	.26	.16	.06	.01	.00	.00	.00
29	.00	.00	2.1	.83	.80	.26	.14	.06	.01	.00	.00	.00
30	.00	.00	1.3	.83	---	.22	.12	.06	.0	.00	.00	.00
31	.00	---	.93	.83	---	.20	---	.05	---	.00	.00	---
TOTAL	0.00	0.00	20.48	69.21	17.95	12.79	5.14	2.64	0.96	0.00	0.00	0.00
MEAN	.00	.00	.66	2.23	.62	.41	.17	.085	.032	.00	.00	.00
MAX	.00	.00	2.1	20	.83	.93	.20	.11	.05	.00	.00	.00
MIN	.00	.00	.04	.67	.52	.20	.12	.05	.00	.00	.00	.00
AC-FT	.0	.0	41	137	36	25	10	5.2	1.9	.0	.0	.0

CAL YR 1987 TOTAL 271.34 MEAN .74 MAX 43 MIN .00 AC-FT 538
WTR YR 1988 TOTAL 129.17 MEAN .35 MAX 20 MIN .00 AC-FT 256

ALAMEDA CREEK BASIN

11176400 ARROYO VALLE BELOW LANG CANYON, NEAR LIVERMORE, CA

LOCATION.--Lat 37°33'41", long 121°40'58", in NE 1/4 NE 1/4 sec.30, T.4 S., R.3 E., Alameda County, Hydrologic Unit 18050004, on left bank 100 ft upstream from small left-bank tributary, 1.2 mi downstream from Lang Canyon, and 9.5 mi southeast of Livermore.

DRAINAGE AREA.--130 mi^2.

PERIOD OF RECORD.--October 1963 to current year. Prior to October 1974, published as "above Lang Canyon, near Livermore."

GAGE.--Water-stage recorder. Concrete control since June 19, 1975. Elevation of gage is 750 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to June 19, 1975, at site 1.4 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--25 years, 37.0 ft^3/s, 26,810 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,790 ft^3/s, Feb. 17, 1986, gage height, 7.36 ft, from rating curve extended above 1,000 ft^3/s on basis of slope-area measurements at gage heights 4.13, 5.40, and 7.36 ft; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s, and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	2100	*106	*1.37				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.47	6.4	4.2	3.7	.98	2.0	.00	.00	.00	.00
2	.00	.00	.35	5.0	4.2	4.2	.96	2.0	.00	.00	.00	.00
3	.00	.00	.24	8.8	3.6	3.4	.97	2.0	.00	.00	.00	.00
4	.00	.00	.76	13	3.3	2.8	1.2	1.9	.00	.00	.00	.00
5	.00	.00	1.2	15	3.3	2.6	1.0	1.7	.00	.00	.00	.00
6	.00	.00	4.0	12	3.3	2.6	.91	2.1	.00	.00	.00	.00
7	.00	.00	21	7.3	3.3	2.6	.86	2.5	.00	.00	.00	.00
8	.00	.00	13	6.5	3.3	2.2	.86	2.6	.00	.00	.00	.00
9	.00	.00	9.5	6.8	3.3	2.0	.83	2.5	.00	.00	.00	.00
10	.00	.00	6.3	5.8	3.3	2.0	.78	2.0	.00	.00	.00	.00
11	.00	.00	4.0	6.1	3.2	2.0	.74	1.8	.00	.00	.00	.00
12	.00	.00	2.9	6.4	2.6	2.0	.68	1.4	.00	.00	.00	.00
13	.00	.00	2.5	4.4	2.6	2.0	.82	1.3	.00	.00	.00	.00
14	.00	.00	2.2	3.6	2.6	2.0	1.3	1.1	.00	.00	.00	.00
15	.00	.00	2.3	9.2	2.6	2.0	1.6	.91	.00	.00	.00	.00
16	.00	.00	3.8	25	2.6	2.0	1.6	1.1	.00	.00	.00	.00
17	.00	.05	6.8	64	2.6	1.7	1.4	1.1	.00	.00	.00	.00
18	.00	.27	7.1	57	2.3	1.6	1.2	.87	.00	.00	.00	.00
19	.00	.06	3.6	28	2.3	1.6	1.7	.64	.00	.00	.00	.00
20	.00	.19	2.6	16	2.1	1.6	2.4	.23	.00	.00	.00	.00
21	.00	.36	2.6	11	2.1	1.6	2.9	.00	.00	.00	.00	.00
22	.00	.12	2.6	7.9	2.5	1.6	2.6	.00	.00	.00	.00	.00
23	.00	.03	2.5	6.2	2.5	1.6	3.8	.00	.00	.00	.00	.00
24	.00	.00	2.0	5.4	2.1	1.6	3.5	.00	.00	.00	.00	.00
25	.00	.00	2.0	5.0	2.1	1.6	2.9	.00	.00	.00	.00	.00
26	.00	.00	1.9	5.0	2.0	1.6	2.5	.00	.00	.00	.00	.00
27	.00	.00	2.0	5.0	2.3	1.3	2.0	.00	.00	.00	.00	.00
28	.00	.00	7.7	4.3	3.3	1.2	2.1	.00	.00	.00	.00	.00
29	.00	.00	19	4.4	3.4	1.2	2.0	.00	.00	.00	.00	.00
30	.00	.05	15	5.0	---	1.1	1.9	.00	.00	.00	.00	.00
31	.00	---	10	5.0	---	1.1	---	.00	---	.00	.00	---
TOTAL	0.00	1.13	161.92	370.5	82.9	62.1	48.99	31.75	0.00	0.00	0.00	0.00
MEAN	.00	.038	5.22	12.0	2.86	2.00	1.63	1.02	.00	.00	.00	.00
MAX	.00	.36	21	64	4.2	4.2	3.8	2.6	.00	.00	.00	.00
MIN	.00	.00	.24	3.6	2.0	1.1	.68	.00	.00	.00	.00	.00
AC-FT	.0	2.2	321	735	164	123	97	63	.0	.0	.0	.0

CAL YR 1987 TOTAL 1490.54 MEAN 4.08 MAX 272 MIN .00 AC-FT 2960
WTR YR 1988 TOTAL 759.29 MEAN 2.07 MAX 64 MIN .00 AC-FT 1510

ALAMEDA CREEK BASIN

11176500 ARROYO VALLE NEAR LIVERMORE, CA

LOCATION.--Lat 37°37'24", long 121°45'28", in Valle de San Jose Grant, Alameda County, Hydrologic Unit 18050004, on right bank 900 ft downstream from highway bridge, 1.1 mi upstream from Dry Creek, 1.3 mi downstream from Del Valle Dam, 4.1 mi south of Livermore, and 6.9 mi southeast of Pleasanton.

DRAINAGE AREA.--147 mi^2.

PERIOD OF RECORD.--January 1912 to September 1930, October 1957 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Published as Arroyo del Valle near Livermore, 1912-29.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 510.44 ft above National Geodetic Vertical Datum of 1929. Prior to November 1914, at site 900 ft upstream at different datum. Nov. 1, 1914, to Sept. 30, 1930, at site 300 ft upstream at different datum.

REMARKS.--Estimated daily discharges: Aug. 6-11. Records fair. Flow regulated by Del Valle Reservoir 1.3 mi upstream beginning in September 1968, capacity, 77,100 acre-ft. Water from Sacramento-San Joaquin Delta imported through South Bay Aqueduct can be pumped into Del Valle Reservoir for storage and later released into the channel for downstream percolation or returned to the South Bay Aqueduct.

AVERAGE DISCHARGE.--29 years (1912-30, 1957-68), 29.6 ft^3/s, 21,450 acre-ft/yr; 20 years (1969-88), 28.0 ft^3/s, 20,290 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,200 ft^3/s, Apr. 2, 1958, gage height, 10.91 ft; no flow at times. Maximum discharge since construction of Del Valle Dam in 1968, 2,850 ft^3/s, Mar. 3, 1983, gage height, 8.89 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 23, 1955, reached a stage of 13.9 ft from floodmarks, discharge, 18,200 ft^3/s, on basis of contracted-opening and slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 23 ft^3/s, Jan. 9, gage height, 2.81 ft; minimum daily, 0.08 ft^3/s, Sept. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.33	.52	5.7	.36	9.6	.70	.43	.43	.29	.18	.22	.31
2	.33	.52	.48	.37	9.6	.59	.43	.43	.29	.18	.26	.28
3	.31	.51	.36	.43	5.9	.52	.39	.43	.29	.19	.30	.26
4	.28	.51	.40	.38	.62	.52	.36	.43	.29	.21	.38	.23
5	.29	.52	.37	.39	.56	.52	.36	.43	.29	.19	.54	.18
6	.27	.52	1.4	5.3	.52	.52	.36	.43	.29	.18	.60	.08
7	.33	.52	2.4	14	.52	.52	.36	.43	.29	.16	.50	.09
8	.36	.52	2.0	14	.50	.52	.36	.43	.29	.17	.30	.11
9	.36	.52	1.9	14	.51	.52	.36	.43	.27	.18	.30	.13
10	.36	.49	1.7	14	.48	.52	.36	.43	.26	.16	.30	.15
11	.36	.43	1.4	11	.47	.52	.36	.42	.26	.31	.33	.10
12	.36	.43	1.4	8.8	.49	.52	.36	.36	.26	.38	.30	.10
13	.36	.43	1.4	8.9	.52	.51	.39	.36	3.7	.38	.29	.12
14	.35	.43	1.2	8.6	.52	.43	.43	.36	7.0	.42	.32	.13
15	.29	.43	1.2	9.1	.52	.43	.43	.36	6.5	.47	.33	.14
16	.29	.43	.96	9.2	.50	.43	.43	.36	3.9	.48	.31	.15
17	.29	.43	.88	9.3	.50	.43	.43	.36	.32	.44	.31	.15
18	.29	.43	.88	9.1	.47	.43	.43	.36	.25	.46	.32	.14
19	.29	.42	.88	9.1	.43	.43	.43	.34	.22	.49	.36	.16
20	.29	.43	.88	11	.43	.43	.43	.29	.23	.57	.43	.19
21	.29	.43	.88	13	.43	.43	.43	.29	.25	.53	.47	.21
22	.29	.42	.80	13	.43	.43	.43	.29	.24	.31	.48	.21
23	.29	.41	.74	13	.43	.42	.43	.29	.25	.14	.50	.22
24	.29	.36	.74	12	.45	.43	.43	.29	.25	.16	.49	.24
25	.29	.36	.74	9.6	.47	.43	.43	.29	.21	.18	.46	.24
26	.29	.36	.74	9.6	.52	.43	.43	.29	.21	.16	.42	.24
27	.30	.36	.74	9.6	.52	.43	.43	.29	.19	.19	.36	.23
28	.59	.36	1.2	9.6	.52	.43	.43	.29	.20	.19	.30	.23
29	.63	.36	.61	9.6	.60	.43	.43	.29	.20	.17	.30	.24
30	.52	3.5	.38	9.6	---	.43	.43	.29	.19	.19	.27	.23
31	.52	---	.36	9.6	---	.43	---	.29	---	.23	.29	---
TOTAL	10.69	16.36	35.72	275.53	38.03	14.73	12.19	11.06	27.68	8.65	11.34	5.49
MEAN	.34	.55	1.15	8.89	1.31	.48	.41	.36	.92	.28	.37	.18
MAX	.63	3.5	5.7	14	9.6	.70	.43	.43	7.0	.57	.60	.31
MIN	.27	.36	.36	.36	.43	.42	.36	.29	.19	.14	.22	.08
AC-FT	21	32	71	547	75	29	24	22	55	17	22	11

CAL YR 1987 TOTAL 184.93 MEAN .51 MAX 11 MIN .12 AC-FT 367
WTR YR 1988 TOTAL 467.47 MEAN 1.28 MAX 14 MIN .08 AC-FT 927

ALAMEDA CREEK BASIN

11177000 ARROYO DE LA LAGUNA NEAR PLEASANTON, CA

LOCATION.--Lat 37°36'55", long 121°52'50", in Valle de San Jose Grant, Alameda County, Hydrologic Unit 18050004, on right bank 0.3 mi upstream from small left bank tributary, 0.8 mi downstream from highway bridge, and 3.2 mi south of Pleasanton.

DRAINAGE AREA.--405 mi^2.

PERIOD OF RECORD.--January 1912 to September 1930, October 1969 to September 1983, October 1987 to September 1988. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 248.40 ft above National Geodetic Vertical Datum of 1929. January 1912 to September 1917, at site 3.0 mi upstream at different datum. October 1917 to September 1930, at site 0.8 mi downstream at different datum. October 1969 to September 1983, at datum 3.00 ft higher.

REMARKS.--Records fair. Flow partly regulated by Del Valle Reservoir 15 mi upstream, capacity, 77,100 acre-ft. Water imported from Sacramento-San Joaquin Delta (see REMARKS for station 11176500).

AVERAGE DISCHARGE.--17 years (water years 1913-19, 1921-30), 42.5 ft^3/s, 30,790 acre-ft/yr; 15 years (water years 1970-83, 1988), 73.3 ft^3/s, 53,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft^3/s, Jan. 5, 1982, gage height, 22.61 ft, present datum; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,890 ft^3/s, Jan. 16, gage height, 9.73 ft; minimum daily, 2.3 ft^3/s, Apr. 2, 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	7.3	20	15	17	53	3.4	13	5.9	3.2	2.9	3.3
2	4.5	7.3	24	14	18	22	2.3	13	4.6	3.7	2.9	3.5
3	4.5	6.5	12	66	17	16	2.5	13	3.0	5.0	2.9	3.6
4	6.9	6.0	63	87	16	13	2.5	13	2.5	5.6	2.9	3.3
5	8.0	5.5	37	54	16	14	2.3	12	2.7	5.6	2.9	3.1
6	6.5	9.1	110	20	16	16	2.5	12	3.7	4.9	2.9	3.1
7	4.1	5.8	91	15	16	11	2.7	14	13	3.5	2.9	3.1
8	4.0	5.2	115	28	15	9.5	3.0	12	4.3	3.2	2.9	3.1
9	3.8	5.4	29	17	14	9.2	3.7	12	3.2	3.2	2.9	3.1
10	3.8	5.1	20	16	14	10	4.0	8.7	2.9	3.2	2.9	3.1
11	3.8	4.7	13	29	14	9.0	7.0	8.3	3.0	3.2	2.9	3.1
12	3.8	4.7	11	16	13	7.4	8.7	7.4	3.1	3.2	3.0	3.7
13	3.6	6.0	7.5	13	9.5	6.6	14	5.9	3.0	3.2	3.0	3.4
14	5.1	16	6.5	12	13	6.0	35	7.4	3.3	3.2	3.2	3.1
15	3.6	8.3	10.0	81	13	5.5	17	7.4	4.2	3.2	3.6	3.1
16	3.2	7.2	18	319	13	5.8	10	18	3.5	3.2	2.6	3.1
17	3.2	75	32	258	13	6.0	10	11	3.3	3.2	2.5	3.1
18	3.2	33	12	62	13	5.6	9.1	7.4	3.7	3.2	2.5	3.6
19	3.5	12	8.5	29	12	4.6	49	5.2	7.3	3.2	2.5	3.4
20	3.3	69	8.1	20	13	3.2	65	5.6	6.5	3.2	2.5	4.0
21	4.1	34	8.2	17	15	3.4	83	6.3	6.6	3.2	2.5	3.6
22	7.4	15	17	14	14	4.3	25	7.0	5.0	3.2	3.1	3.2
23	12	11	11	16	13	4.6	41	7.0	5.4	3.2	2.6	3.0
24	15	6.6	9.6	15	12	4.9	17	5.9	5.0	3.2	2.7	3.3
25	6.2	5.4	9.9	14	13	5.6	13	5.2	4.4	3.2	2.9	3.6
26	5.8	4.5	9.9	12	12	5.6	11	6.3	4.7	2.9	3.1	3.3
27	5.2	4.7	11	14	23	7.0	7.8	6.3	5.4	2.9	3.5	3.1
28	137	6.7	130	14	34	6.7	11	7.0	5.2	2.9	3.5	3.3
29	50	7.3	95	29	37	5.2	9.6	9.1	4.2	2.9	3.3	3.2
30	14	15	28	19	---	5.2	12	7.4	3.8	2.9	3.3	3.2
31	9.5	---	17	18	---	5.2	---	6.3	---	2.9	3.2	---
TOTAL	353.3	409.3	994.2	1353	458.5	291.1	484.1	280.1	136.4	106.5	91.0	98.7
MEAN	11.4	13.6	32.1	43.6	15.8	9.39	16.1	9.04	4.55	3.44	2.94	3.29
MAX	137	75	130	319	37	53	83	18	13	5.6	3.6	4.0
MIN	3.2	4.5	6.5	12	9.5	3.2	2.3	5.2	2.5	2.9	2.5	3.0
AC-FT	701	812	1970	2680	909	577	960	556	271	211	180	196

WTR YR 1988 TOTAL 5056.2 MEAN 13.8 MAX 319 MIN 2.3 AC-FT 10030

11179000 ALAMEDA CREEK NEAR NILES, CA

LOCATION.--Lat 37°35'14", long 121°57'35", in NW 1/4 sec.15, T.4 S., R.1 W., Alameda County, Hydrologic Unit 18050004, on right bank 0.3 mi downstream from railroad bridge, 1.2 mi northeast of Niles, and 8.3 mi downstream from James H. Turner Dam on San Antonio Creek.

DRAINAGE AREA.--633 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1891 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Published as "at Niles Dam" 1891-1900 and as "at Sunolglen" 1901-21.

REVISED RECORDS.--WSP 1315-B: 1921. WSP 1515: 1951-52, 1956. WSP 1565: 1945. WDR CA-86-2: 1984(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 85.65 ft above National Geodetic Vertical Datum of 1929. Prior to 1901, nonrecording gage at site 1 mi upstream at different datum. From 1901 to Sept. 30, 1914, nonrecording gage; Oct. 1, 1914, to Sept. 30, 1916, water-stage recorder at site 4.5 mi upstream at different datum; Oct. 1, 1916, to Dec. 17, 1923, water-stage recorder at site 800 ft upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1916 by Calaveras Reservoir, although dam not completed until 1925, usable capacity, 96,800 acre-ft, most of which is diverted for San Francisco water supply; since February 1965 by San Antonio Reservoir, capacity, 51,000 acre-ft; and since September 1968 by Del Valle Reservoir, 23 mi upstream, capacity, 77,100 acre-ft. Natural flow of stream affected by water imported from Delta-Mendota Canal beginning in 1962. Other diversions from ground-water basin for irrigation of 9,000 acres above station.

AVERAGE DISCHARGE.--71 years (water years 1892-1962), 123 ft^3/s, 89,110 acre-ft/yr; 26 years (water years 1963-88), 123 ft^3/s, 89,110 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,000 ft^3/s, Dec. 23, 1955, gage height, 14.9 ft; minimum (water years 1892-1962), no flow at times; minimum daily (water years 1963-88), 0.63 ft^3/s, Oct. 7-10, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,470 ft^3/s, Jan. 16, gage height, 5.62 ft; minimum daily, 2.2 ft^3/s, Aug. 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	13	59	38	33	67	54	36	62	53	52	57
2	4.5	12	63	37	44	33	52	15	61	53	52	57
3	4.6	13	42	83	47	37	46	15	59	54	26	56
4	6.7	38	60	86	44	46	32	34	58	55	5.5	58
5	7.9	37	67	83	45	47	31	51	57	55	3.3	58
6	6.7	40	98	30	43	56	30	51	56	52	3.1	57
7	10	38	107	25	44	49	29	52	32	54	2.8	56
8	12	37	126	52	43	48	27	53	34	54	2.5	56
9	16	38	46	40	42	49	17	51	39	55	3.0	56
10	18	37	27	42	42	59	5.7	49	52	55	2.6	57
11	18	38	20	63	42	59	6.9	48	54	55	2.5	58
12	19	42	47	50	41	59	9.4	55	55	53	2.2	58
13	19	68	45	46	48	61	11	58	55	53	2.6	55
14	19	32	44	19	47	46	28	64	54	52	4.4	8.1
15	8.9	36	35	84	48	48	30	64	55	52	5.6	5.0
16	5.4	45	16	285	48	50	15	54	54	52	3.5	30
17	5.6	89	40	295	47	53	14	52	55	51	7.2	54
18	6.4	50	33	96	46	57	13	54	55	52	41	54
19	5.7	21	42	45	53	56	31	53	59	52	49	54
20	5.6	57	41	37	51	54	47	54	59	50	54	52
21	4.6	53	41	43	53	54	116	58	57	51	57	53
22	5.6	22	47	41	26	55	28	61	45	51	59	53
23	12	32	38	38	18	56	51	60	44	51	58	52
24	15	34	36	33	17	57	26	53	50	53	56	53
25	18	33	37	29	17	62	19	58	54	52	57	55
26	20	41	36	26	17	61	16	63	55	51	55	55
27	9.6	42	33	27	17	64	22	66	57	51	56	51
28	109	49	128	29	51	64	53	65	56	51	58	48
29	79	45	120	34	27	62	52	69	54	50	59	47
30	23	46	43	43	---	63	52	65	53	51	58	47
31	17	---	36	32	---	59	---	64	---	52	57	---
TOTAL	516.1	1178	1653	1911	1141	1691	964.0	1645	1590	1626	954.8	1510.1
MEAN	16.6	39.3	53.3	61.6	39.3	54.5	32.1	53.1	53.0	52.5	30.8	50.3
MAX	109	89	128	295	53	67	116	69	62	55	59	58
MIN	4.3	12	16	19	17	33	5.7	15	32	50	2.2	5.0
AC-FT	1020	2340	3280	3790	2260	3350	1910	3260	3150	3230	1890	3000

CAL YR 1987 TOTAL 16801.0 MEAN 46.0 MAX 1590 MIN 4.3 AC-FT 33320
WTR YR 1988 TOTAL 16380.0 MEAN 44.8 MAX 295 MIN 2.2 AC-FT 32490

11179000 ALAMEDA CREEK NEAR NILES, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1906, 1952-73, 1975 to current year.
CHEMICAL DATA: Water years 1906, 1952-67, 1969, 1975-79.
SPECIFIC CONDUCTANCE: Water years 1956-57, 1959-62, 1976 to current year.
WATER TEMPERATURE: Water years 1956-73, 1976-78.
SEDIMENT DATA: Water years 1957-73.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1956 to July 1957, August 1959 to September 1962, October 1975 to current year.
WATER TEMPERATURE: July 1956 to September 1973, October 1975 to September 1978.

INSTRUMENTATION.--Water-quality monitor since October 1975. Digital recorder set for 1-hour-interval punches.

REMARKS.--Differences between specific conductance recorder values before adjustment and field measurement values exceeded +/- 10 percent at times during the year. Interruptions in record were due to malfunction of recording instruments. Specific conductance affected by regulation of imported water.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 1,530 microsiemens, Nov. 19, 1977; minimum recorded, 122 microsiemens, Jan. 22, 1983.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 1,470 microsiemens, Dec. 17; minimum recorded, 198 microsiemens, Jan. 16.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1080	1050	1170	1150	1050	818	817	803	914	797	976	800
2	1060	1030	1180	1160	970	886	830	746	965	801	788	704
3	---	---	1260	1180	968	931	992	523	812	704	840	748
4	1020	991	1290	913	1020	761	846	444	797	698	805	713
5	1000	975	915	899	712	418	619	451	771	744	733	709
6	1010	972	1010	895	895	331	900	645	761	715	715	631
7	1020	971	965	875	649	354	1020	847	733	724	741	669
8	1020	990	876	861	683	342	1020	860	733	723	742	716
9	990	877	891	867	690	349	858	744	732	710	733	711
10	880	868	877	865	893	695	905	744	726	707	730	678
11	892	881	869	775	1040	893	953	749	730	714	697	670
12	904	892	866	767	1040	951	784	647	727	607	701	682
13	904	891	1030	745	975	954	806	698	691	503	713	697
14	898	892	696	571	977	963	944	791	675	501	718	700
15	913	834	873	574	1030	975	917	397	672	601	926	718
16	844	838	852	814	1180	1020	702	198	653	638	754	745
17	---	---	1000	471	1470	788	548	208	651	636	767	742
18	---	---	640	377	799	732	751	471	655	617	743	722
19	---	---	861	589	825	792	930	697	657	599	728	687
20	---	---	1060	786	828	746	---	---	612	506	686	670
21	---	---	646	383	833	746	---	---	634	608	702	678
22	---	---	933	685	893	753	932	910	800	603	755	704
23	---	---	976	918	911	750	929	923	---	---	793	735
24	---	---	941	924	790	747	992	930	---	---	813	774
25	---	---	935	920	793	757	---	---	1000	911	823	686
26	928	885	933	892	803	788	---	---	1100	1000	700	689
27	935	860	893	881	841	745	---	---	1140	1100	713	694
28	1000	530	931	883	955	361	---	---	1200	700	720	702
29	751	409	957	931	614	402	973	583	820	604	740	713
30	1010	650	944	927	716	545	1030	933	---	---	727	718
31	1050	1010	---	---	923	721	828	699	---	---	734	724
MONTH	---	---	1290	377	1470	331	---	---	---	---	976	631

ALAMEDA CREEK BASIN

11179000 ALAMEDA CREEK NEAR NILES, CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	738	713	534	516	514	495	652	609	793	775	808	774
2	714	695	825	536	502	481	736	645	788	773	800	787
3	699	692	932	848	479	475	721	677	795	768	803	781
4	755	694	979	547	481	470	896	711	814	794	820	794
5	759	746	547	518	490	483	---	---	837	810	827	805
6	744	727	542	526	524	486	---	---	878	826	834	807
7	725	715	529	512	969	525	618	602	1010	880	827	813
8	714	691	576	523	965	546	621	610	1060	1010	834	814
9	712	703	549	526	544	498	630	607	1100	1040	823	777
10	739	712	543	520	502	490	655	615	1140	1080	801	781
11	858	738	525	507	503	498	667	634	1140	1110	812	787
12	1220	858	522	490	513	500	---	---	1110	1090	802	774
13	1290	1240	507	482	542	507	638	619	1120	1090	867	803
14	1240	1160	512	482	533	519	639	610	1170	1100	836	812
15	1150	637	515	464	557	522	639	620	1220	1170	843	816
16	756	638	516	488	545	535	660	625	1280	1240	1090	837
17	890	759	963	490	544	536	667	644	1370	1250	845	822
18	965	897	492	472	556	535	664	648	1460	724	854	815
19	1130	933	485	469	633	544	665	639	805	791	855	818
20	945	443	480	460	637	608	667	646	790	762	892	821
21	610	256	499	481	613	580	674	654	770	751	1130	863
22	669	440	509	484	586	570	699	676	758	749	1140	899
23	836	655	505	496	594	568	723	690	756	737	1140	932
24	631	536	511	493	605	583	735	712	744	727	1030	714
25	810	602	520	473	602	570	763	725	726	713	849	799
26	888	818	488	479	614	576	749	736	747	713	1030	827
27	973	889	495	470	645	612	755	731	770	742	1120	938
28	967	524	497	485	653	623	759	734	788	755	958	854
29	559	498	571	492	636	618	765	741	807	775	924	888
30	513	499	535	502	638	619	776	752	801	773	932	905
31	---	---	508	501	---	---	780	761	804	780	---	---
MONTH	1290	256	979	460	969	470	---	---	1460	713	1140	714

11180500 DRY CREEK AT UNION CITY, CA

LOCATION.--Lat 37°36'22", long 122°01'22", in Arroyo de la Alameda Grant, Alameda County, Hydrologic Unit 18050004, on right bank 900 ft downstream from bridge on State Highway 238 in Decoto District in Union City and 1.7 mi upstream from mouth.

DRAINAGE AREA.--9.39 mi^2.

PERIOD OF RECORD.--October 1916 to September 1919 (published as "near Decoto"), April 1959 to current year.

REVISED RECORDS.--WSP 2129: 1962(M), 1966(P). WDR CA-76-2: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 85.12 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 1, 1959, at site 1.4 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--32 years, 2.52 ft^3/s, 1,820 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,330 ft^3/s, Jan. 26, 1983, gage height, 5.14 ft, from rating curve extended above 600 ft^3/s on basis of slope-area measurement of peak flow; maximum gage height, 5.27 ft, Oct. 13, 1962, from high-water marks past gage; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 90 ft^3/s, and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	0745	*25	*2.13				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.13	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.04	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.08	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.06	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	1.6	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.11	.00	9.3	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	4.5	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	2.3	.00	.00	.09	.00	.00	.00	.00	.00
20	.00	.05	.00	1.4	.00	.00	.01	.00	.00	.00	.00	.00
21	.00	.00	.00	.93	.00	.00	.01	.00	.00	.00	.00	.00
22	.00	.00	.00	.57	.00	.00	.01	.00	.00	.00	.00	.00
23	.00	.00	.00	.39	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.24	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.09	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00	.00	.00
27	.11	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00
28	.01	.00	.05	.01	.02	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.01	.10	.01	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.18	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.10	---	.00	---	.00	---	.00	.00	---
TOTAL	0.12	0.24	0.27	21.83	0.06	0.00	0.12	0.00	0.00	0.00	0.00	0.00
MEAN	.004	.008	.009	.70	.002	.00	.004	.00	.00	.00	.00	.00
MAX	.11	.11	.13	9.3	.03	.00	.09	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.2	.5	.5	43	.1	.0	.2	.0	.0	.0	.0	.0

CAL YR 1987 TOTAL 153.42 MEAN .42 MAX 60 MIN .00 AC-FT 304
WTR YR 1988 TOTAL 22.64 MEAN .062 MAX 9.3 MIN .00 AC-FT 45

11180700 PATTERSON CREEK AT UNION CITY, CA

LOCATION.--Lat 37°35'09", long 122°02'50", in Potrero de Los Cerritos Grant, Alameda County, Hydrologic Unit 18050004, on right bank 0.1 mi downstream from effluence from Alameda Creek, 0.2 mi upstream from bridge on Interstate 880 (Nimitz Freeway), and 2.0 mi southwest of Decoto District in Union City.

PERIOD OF RECORD.--October 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4.13 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 28, 1966, at site 0.2 mi downstream at same datum.

REMARKS.--No estimated daily discharges. Records poor. This stream is a distributary of Alameda Creek. Diversion by Alameda County Water District to percolation ponds between station 11179000 and this station; additional percolation to ground water by placing check dams in channel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,100 ft^3/s, Feb. 19, 1986, gage height, 18.44 ft; no flow at times in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,240 ft^3/s, Jan. 16, gage height, 10.39 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.88	.01	.00	.00	.83	1.0	.00	.00	.00	.00	.00	.00
2	.00	.00	6.4	.00	.83	2.1	.00	.00	.00	.00	.00	.00
3	.00	.00	6.1	.00	.80	.22	.00	.00	.00	.00	.00	.00
4	.00	.00	14	34	.73	.17	.00	.00	.00	.00	.00	.00
5	.00	.00	27	66	.73	.17	.00	.00	.00	.00	.00	.00
6	.00	.00	186	5.1	.73	.17	.00	.00	1.2	.00	.00	.00
7	.00	.00	152	.00	.65	.14	.00	.01	5.3	.00	.00	.00
8	.00	.00	127	.00	.65	.13	.00	.00	.20	.00	.00	.00
9	.00	.00	37	.00	.65	.13	.00	.00	.00	.00	.00	.00
10	.00	.00	.13	.00	.58	.12	.00	.00	.00	.00	.00	.00
11	.00	.00	1.1	.00	.57	.10	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.57	.10	.00	.00	.00	.00	.00	.00
13	.00	.14	.00	.00	.53	.10	.00	.00	.00	.00	.00	.00
14	.00	22	.00	.11	.49	.08	.02	.00	.00	.00	.00	.00
15	.00	.00	92	192	.49	.08	2.9	.00	.00	.00	.00	.00
16	.00	.00	4.6	373	.48	.08	.17	.36	.00	.00	.00	.00
17	.00	49	.00	482	.43	.06	.16	.73	.00	.00	.00	.00
18	.00	74	.00	133	.43	.05	.00	.05	.00	.00	.00	.00
19	.00	4.9	.00	2.2	.43	.05	18	.00	.00	.00	.00	.00
20	5.3	66	.00	1.3	.37	.04	47	.00	.0	.00	.00	.00
21	3.8	64	.00	1.2	.37	.02	111	.00	.00	.00	.00	.00
22	.15	.00	.00	1.1	.37	.02	9.6	.00	.00	.00	.00	.00
23	.50	.00	.00	1.1	.33	.02	.89	.00	.00	.00	.00	.00
24	.08	.00	.00	1.1	.31	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	1.0	.31	.00	.00	.00	.00	.00	.00	.00
26	.0	.00	.00	1.0	.29	.00	.00	.00	.00	.00	.00	.00
27	4.0	.00	.01	1.0	.26	.00	.00	.00	.00	.00	.00	.00
28	157	.00	260	.94	.71	.00	.00	.00	.00	.00	.00	.00
29	37	.00	106	2.1	.31	.00	.00	.00	.00	.00	.00	.00
30	12	.00	17	1.0	---	.00	.00	.00	.00	.00	.00	.00
31	.41	---	.00	.87	---	.00	---	.00	---	.00	.00	---
TOTAL	221.12	280.05	1036.34	1301.12	15.23	5.15	189.74	1.15	6.70	0.00	0.00	0.00
MEAN	7.13	9.33	33.4	42.0	.53	.17	6.32	.037	.22	.00	.00	.00
MAX	157	74	260	482	.83	2.1	111	.73	5.3	.00	.00	.00
MIN	.00	.00	.00	.00	.26	.00	.00	.00	.00	.00	.00	.00
AC-FT	439	555	2060	2580	30	10	376	2.3	13	.0	.0	.0

CAL YR 1987 TOTAL 7807.46 MEAN 21.4 MAX 2640 MIN .00 AC-FT 15490
WTR YR 1988 TOTAL 3056.60 MEAN 8.35 MAX 482 MIN .00 AC-FT 6060

SAN LORENZO CREEK BASIN

11180825 SAN LORENZO CREEK ABOVE DON CASTRO RESERVOIR, NEAR CASTRO VALLEY, CA

LOCATION.--Lat 37°41'42", long 122°02'38", in San Lorenzo Grant, Alameda County, Hydrologic Unit 18050004, on left bank, 250 ft south of Interstate Highway 580, 0.4 mi southeast of Independent School, and 2.2 mi east of Castro Valley.

DRAINAGE AREA.--18.0 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 260 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Some regulation of low flow by ponds above station.

AVERAGE DISCHARGE.--8 years, 8.45 ft^3/s, 6,120 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,460 ft^3/s, Feb. 18, 1986, gage height, 8.33 ft; maximum gage height, 9.50 ft, Jan. 24, 1983; no flow for many days in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 275 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 16	0930	*228	*3.08				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	1.0	.86	.40	.98	1.1	.40	.36	.31	.02	.00	.00
2	.09	1.2	1.5	.43	.79	.90	.58	.46	.26	.03	.00	.00
3	.07	1.3	.48	1.8	.80	1.1	.72	.33	.21	.05	.00	.00
4	.03	1.3	12	7.3	.96	.78	.81	.55	.21	.03	.00	.00
5	.04	1.8	2.2	2.0	.94	.95	.36	.26	.17	.02	.00	.00
6	.01	1.9	11	.87	.72	1.2	.39	.95	3.5	.02	.00	.00
7	.01	1.4	4.6	1.1	.94	1.0	.38	1.3	2.5	.01	.00	.00
8	.02	1.4	9.4	1.2	1.1	1.0	.63	.46	.38	.01	.00	.00
9	.03	1.4	1.7	.81	1.2	.77	.48	.40	.19	.04	.00	.00
10	.04	1.4	1.8	.89	1.1	.69	.59	.21	.17	.03	.00	.00
11	.03	1.4	1.1	2.7	1.0	.68	.42	.23	.16	.01	.00	.00
12	.03	2.1	1.1	.83	1.9	.58	.88	.16	.24	.43	.00	.00
13	.70	5.9	1.7	.55	1.0	.82	.68	.20	.21	.05	.0	.00
14	.10	.85	2.1	.46	1.5	.87	2.1	.21	.14	.05	.01	.00
15	.70	.81	3.0	6.5	.86	.74	1.1	.15	.13	.03	.0	.00
16	.11	.68	4.7	29	.80	.68	.99	1.5	.15	.03	.01	.00
17	.08	5.1	1.6	36	.69	.67	1.1	.60	.14	.02	.01	.00
18	.08	.74	.96	6.5	.68	.56	.81	.29	.17	.00	.0	.00
19	.08	.55	1.0	3.0	.69	.80	9.1	.18	.08	.00	.00	.00
20	.09	8.2	.96	2.0	.77	.68	4.0	.16	.07	.00	.00	.00
21	.33	.49	.98	1.6	.92	.66	2.1	.15	.15	.00	.00	.00
22	.27	.23	1.8	1.5	.81	.58	3.2	.13	.18	.00	.00	.00
23	.92	.18	1.1	1.4	.79	.57	3.5	.19	.19	.0	.00	.00
24	.25	.17	1.1	1.3	.74	.54	.87	.18	.08	.00	.00	.00
25	.13	.21	1.2	1.1	.69	.54	2.4	.27	.07	.00	.00	.00
26	.13	.20	1.1	1.1	.78	.44	.54	.21	.06	.00	.00	.00
27	4.6	.20	1.7	1.1	1.4	.25	.37	.27	.03	.00	.00	.00
28	5.9	.20	7.4	.95	3.9	.20	.68	.49	.05	.00	.00	.00
29	1.4	.25	3.4	3.7	.94	.26	.55	.71	.03	.00	.00	.00
30	1.1	1.2	.54	1.4	---	.34	.41	.34	.02	.00	.00	.00
31	1.0	---	.41	1.1	---	.20	---	.28	---	.00	.00	---
TOTAL	18.45	43.76	84.49	120.59	30.39	21.15	41.14	12.18	10.25	0.88	0.03	0.00
MEAN	.60	1.46	2.73	3.89	1.05	.68	1.37	.39	.34	.028	.001	.00
MAX	5.9	8.2	12	36	3.9	1.2	9.1	1.5	3.5	.43	.01	.00
MIN	.01	.17	.41	.40	.68	.20	.36	.13	.02	.00	.00	.00
AC-FT	37	87	168	239	60	42	82	24	20	1.7	.06	.0

CAL YR 1987 TOTAL 676.68 MEAN 1.85 MAX 165 MIN .01 AC-FT 1340
WTR YR 1988 TOTAL 383.31 MEAN 1.05 MAX 36 MIN .00 AC-FT 760

11180825 SAN LORENZO CREEK ABOVE DON CASTRO RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1980 to current year (storm season only).
WATER TEMPERATURE: December 1980 to current year.
SEDIMENT DATA: December 1980 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: December 1980 to current year.
SUSPENDED-SEDIMENT DISCHARGE: December 1980 to current year.

REMARKS.--Sediment samples were collected on most days where water temperature is published. Zero bedload discharge observed for flows less than 10 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--
SEDIMENT CONCENTRATION (storm season only): Maximum daily mean, 10,000 mg/L, Jan. 4, 1982; minimum daily mean, 2 mg/L, Jan. 2, 3, 5, Mar. 3, 4, 1981.
SEDIMENT LOAD (storm season only): Maximum daily, 19,800 tons, Jan. 4, 1982; minimum daily, 0 ton several days in most years.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION (storm season only): Maximum daily mean, 1,610 mg/L, Jan. 16; minimum daily mean, 3 mg/L, several days.
SEDIMENT LOAD (storm season only): Maximum daily, 363 tons, Jan. 16; 0 ton, many days.

WATER TEMPERATURE, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1987 TO APRIL 1988
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR
1	---	---	---	5.5	8.0	---	---
2	---	---	13.0	6.0	---	12.0	13.0
3	---	---	---	7.0	7.0	---	---
4	---	13.0	13.0	9.5	---	11.0	14.5
5	---	---	---	10.0	7.0	---	---
6	16.0	---	---	9.5	---	---	15.0
7	---	14.0	10.5	---	---	13.0	---
8	---	---	11.0	10.0	9.5	---	14.5
9	---	---	12.5	10.5	---	13.5	---
10	---	---	13.5	---	10.5	---	---
11	---	13.0	---	---	---	10.5	---
12	---	---	---	7.5	11.0	---	---
13	---	14.5	6.0	8.0	---	---	13.5
14	---	---	---	---	11.0	12.0	11.5
15	---	---	6.5	10.0	10.5	---	12.0
16	12.0	---	8.0	9.0	---	12.5	---
17	---	13.5	8.0	8.5	10.5	---	---
18	---	13.0	8.0	---	---	---	---
19	---	---	---	8.0	10.5	---	14.0
20	14.0	12.5	---	8.5	---	14.0	13.5
21	---	11.5	---	---	---	---	12.5
22	---	---	---	7.5	---	14.5	14.0
23	15.5	---	---	---	12.0	---	12.0
24	---	---	---	---	11.5	14.0	12.0
25	---	---	---	10.0	---	---	16.0
26	---	---	---	---	---	---	15.0
27	16.0	8.0	---	11.0	---	13.0	14.0
28	17.0	---	---	---	14.0	---	13.0
29	15.5	---	8.0	11.5	13.0	14.5	13.0
30	---	11.0	---	11.5	---	---	11.5
31	---	---	---	8.0	---	14.0	---

11180825 SAN LORENZO CREEK ABOVE DON CASTRO RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	.08	7	.00	1.0	7	.02	.86	48	.29
2	.09	9	.00	1.2	5	.02	1.5	75	1.3
3	.07	6	.00	1.3	6	.02	.48	21	.04
4	.03	3	.00	1.3	4	.01	12	1480	250
5	.04	7	.00	1.8	16	.11	2.2	28	.22
6	.01	5	.00	1.9	11	.06	11	918	99
7	.01	5	.00	1.4	7	.03	4.6	263	6.0
8	.02	3	.00	1.4	4	.02	9.4	1130	82
9	.03	6	.00	1.4	5	.02	1.7	189	1.0
10	.04	4	.00	1.4	6	.02	1.8	63	.35
11	.03	3	.00	1.4	13	.05	1.1	15	.04
12	.03	5	.00	2.1	28	.17	1.1	21	.06
13	.70	26	.15	5.9	229	15	1.7	32	.15
14	.10	16	.00	.85	25	.06	2.1	28	.16
15	.70	39	.13	.81	28	.07	3.0	57	.65
16	.11	13	.00	.68	18	.03	4.7	130	2.2
17	.08	6	.00	5.1	126	3.8	1.6	40	.17
18	.08	9	.00	.74	6	.01	.96	12	.03
19	.08	15	.00	.55	3	.00	1.0	17	.05
20	.09	21	.01	8.2	339	34	.96	12	.03
21	.33	31	.03	.49	101	.13	.98	8	.02
22	.27	30	.02	.23	40	.02	1.8	51	.29
23	.92	31	.12	.18	16	.01	1.1	8	.02
24	.25	21	.01	.17	10	.00	1.1	14	.05
25	.13	15	.01	.21	16	.01	1.2	16	.06
26	.13	14	.00	.20	11	.01	1.1	18	.06
27	4.6	115	8.1	.20	6	.00	1.7	86	1.3
28	5.9	191	7.0	.20	5	.00	7.4	468	19
29	1.4	23	.09	.25	12	.01	3.4	296	6.5
30	1.1	10	.03	1.2	54	.28	.54	21	.03
31	1.0	9	.02	---	---	---	.41	25	.03
TOTAL	18.45	---	15.72	43.76	---	53.99	84.49	---	471.10
		JANUARY			FEBRUARY			MARCH	
1	.40	37	.04	.98	5	.01	1.1	30	.10
2	.43	52	.08	.79	4	.01	.90	12	.03
3	1.8	73	.45	.80	6	.01	1.1	24	.08
4	7.3	240	10	.96	7	.02	.78	8	.02
5	2.0	54	.35	.94	9	.02	.95	10	.03
6	.87	34	.08	.72	11	.02	1.2	23	.09
7	1.1	37	.22	.94	14	.04	1.0	22	.07
8	1.2	26	.11	1.1	11	.03	1.0	18	.05
9	.81	16	.04	1.2	10	.03	.77	15	.03
10	.89	19	.12	1.1	8	.02	.69	13	.02
11	2.7	99	1.2	1.0	10	.03	.68	12	.02
12	.83	19	.04	1.9	8	.04	.58	10	.02
13	.55	16	.02	1.0	6	.02	.82	14	.03
14	.46	13	.02	1.5	7	.03	.87	13	.03
15	6.5	612	26	.86	3	.01	.74	9	.02
16	29	1610	363	.80	3	.01	.68	13	.02
17	36	898	163	.69	4	.01	.67	12	.02
18	6.5	46	.91	.68	5	.01	.56	12	.02
19	3.0	11	.09	.69	6	.01	.80	13	.03
20	2.0	13	.07	.77	7	.01	.68	9	.02
21	1.6	27	.12	.92	6	.01	.66	12	.02
22	1.5	39	.16	.81	5	.01	.58	16	.03
23	1.4	28	.11	.79	4	.01	.57	17	.03
24	1.3	15	.05	.74	4	.01	.54	12	.02
25	1.1	19	.06	.69	3	.01	.54	12	.02
26	1.1	18	.05	.78	5	.01	.44	11	.01
27	1.1	11	.03	1.4	27	.53	.25	21	.01
28	.95	10	.03	3.9	127	4.9	.20	14	.01
29	3.7	123	2.3	.94	17	.06	.26	14	.01
30	1.4	29	.11	---	---	---	.34	57	.09
31	1.1	13	.04	---	---	---	.20	34	.02
TOTAL	120.59	---	568.90	30.39	---	5.94	21.15	---	1.02

SAN LORENZO CREEK BASIN

11180825 SAN LORENZO CREEK ABOVE DON CASTRO RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL	
1	.40	33	.04
2	.58	26	.04
3	.72	20	.04
4	.81	16	.03
5	.36	12	.01
6	.39	21	.02
7	.38	20	.02
8	.63	29	.06
9	.48	12	.02
10	.59	22	.06
11	.42	17	.02
12	.88	31	.13
13	.68	21	.04
14	2.1	62	.59
15	1.1	19	.06
16	.99	16	.04
17	1.1	15	.04
18	.81	13	.03
19	9.1	365	19
20	4.0	293	6.8
21	2.1	119	1.0
22	3.2	27	.34
23	3.5	68	1.1
24	.87	33	.08
25	2.4	19	.20
26	.54	22	.04
27	.37	14	.01
28	.68	33	.10
29	.55	23	.04
30	.41	28	.03
TOTAL	41.14	---	30.03
PERIOD	359.97		1146.70

SAN LORENZO CREEK BASIN

11180825 SAN LORENZO CREEK ABOVE DON CASTRO RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1987	18.45	15.72	0	16
NOVEMBER	43.76	53.99	1	55
DECEMBER	84.49	471.10	2	473
JANUARY 1988	120.59	568.90	8	577
FEBRUARY	30.39	5.94	0	6
MARCH	21.15	1.02	0	1
APRIL	41.14	30.03	0	30
PERIOD	359.97	1146.70	11	1158

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM
DEC							
29...	1420	2.8	8.0	157	1.2	--	--
JAN							
15...	1140	2.8	9.5	470	3.6	--	--
15...	1710	1.4	10.0	140	0.53	--	--
16...	0945	210	9.0	5840	3310	45	51
16...	1045	118	9.0	4770	1520	49	59
17...	0900	68	8.0	1360	250	--	--
17...	1715	20	8.5	275	15	--	--
29...	1740	7.1	11.5	221	4.2	--	--
FEB							
28...	1530	1.2	14.0	30	0.10	--	--
APR							
19...	1210	2.7	14.0	126	0.92	--	--
19...	1340	12	14.0	377	12	--	--
19...	1555	50	14.0	1320	178	39	48
19...	1710	14	14.0	360	14	--	--
19...	1855	6.2	14.0	290	4.9	--	--
20...	1010	1.6	12.0	147	0.64	--	--
20...	1520	5.0	13.5	133	1.8	--	--
20...	2040	6.2	13.0	85	1.4	--	--
22...	1055	6.8	14.0	55	1.0	--	--
25...	0945	6.5	11.5	41	0.72	--	--

SAN LORENZO CREEK BASIN

11180825 SAN LORENZO CREEK ABOVE DON CASTRO RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM
DEC							
29...	--	--	--	99	100	--	--
JAN							
15...	--	--	--	100	--	--	--
15...	--	--	--	99	100	--	--
16...	63	76	86	91	95	98	100
16...	69	65	94	97	99	100	--
17...	--	--	--	98	99	100	--
17...	--	--	--	98	99	100	--
29...	--	--	--	99	99	100	--
FEB							
28...	--	--	--	97	--	--	--
APR							
19...	--	--	--	99	99	100	--
19...	--	--	--	100	--	--	--
19...	61	79	93	99	100	--	--
19...	--	--	--	100	--	--	--
19...	--	--	--	98	--	--	--
20...	--	--	--	100	--	--	--
20...	--	--	--	96	--	--	--
20...	--	--	--	99	100	--	--
22...	--	--	--	97	--	--	--
25...	--	--	--	100	--	--	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	TEMPER-ATURE WATER (DEG C)	NUMBER OF SAM-PLING POINTS (COUNT)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
MAR								
29...	1555	14.5	1	0.33	10	30	68	95
29...	1600	14.5	1	0.33	18	46	81	98
29...	1605	14.5	1	0.33	21	43	70	81
29...	1610	14.5	1	0.33	12	18	27	34
29...	1615	14.5	1	0.33	--	--	2	7
29...	1620	14.5	1	0.33	32	54	72	83
29...	1625	14.5	1	0.33	16	55	88	96
29...	1630	14.5	1	0.33	19	59	92	99
29...	1635	14.5	1	0.33	18	55	88	97
29...	1640	14.5	1	0.33	35	65	79	87

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
MAR							
29...	99	100	--	--	--	--	--
29...	100	--	--	--	--	--	--
29...	90	98	99	100	--	--	--
29...	41	47	53	58	66	100	--
29...	11	15	21	28	42	82	100
29...	94	99	100	--	--	--	--
29...	99	100	--	--	--	--	--
29...	100	--	--	--	--	--	--
29...	99	100	--	--	--	--	--
29...	96	100	--	--	--	--	--

11180960 CULL CREEK ABOVE CULL CREEK RESERVOIR, NEAR CASTRO VALLEY, CA

LOCATION.--Lat 37°42'55", long 122°03'12", in San Lorenzo (Castro) Grant, Alameda County, Hydrologic Unit 18050004, on left bank 0.9 mi upstream from Cull Creek Dam and 1.1 mi northeast of Castro Valley Post Office.

DRAINAGE AREA.--5.79 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1978 to current year.

REVISIONS.--WDR CA-80-2: 1979(P).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 450 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 27 to Dec. 2. Records good above 0.50 ft^3/s and fair below.

AVERAGE DISCHARGE.--10 years, 3.78 ft^3/s, 2,740 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,690 ft^3/s, Jan. 5, 1982, gage height, 8.71 ft; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 16	*0930	46	*2.41				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.01	.06	.45	.27	.06	.02	.01	.00	.00	.00
2	.00	.00	.02	.06	.39	.23	.06	.02	.01	.00	.00	.00
3	.00	.00	.02	.17	.34	.23	.06	.02	.01	.00	.00	.00
4	.00	.00	.09	1.1	.33	.21	.07	.02	.01	.00	.00	.00
5	.00	.00	.02	1.6	.33	.19	.07	.02	.01	.00	.00	.00
6	.00	.00	.45	.63	.33	.19	.07	.02	.03	.00	.00	.00
7	.00	.00	.15	.35	.33	.19	.07	.03	.02	.00	.00	.00
8	.00	.00	.99	.38	.33	.19	.06	.06	.01	.00	.00	.00
9	.00	.00	.15	.37	.33	.16	.06	.04	.01	.00	.00	.00
10	.00	.00	.04	.33	.33	.15	.04	.02	.01	.00	.00	.00
11	.00	.00	.02	.73	.33	.15	.03	.02	.01	.00	.00	.00
12	.00	.00	.01	.44	.33	.15	.02	.01	.01	.00	.00	.00
13	.00	.03	.01	.35	.32	.12	.02	.01	.01	.00	.00	.00
14	.00	.00	.01	.33	.27	.12	.03	.01	.01	.00	.00	.00
15	.00	.00	.01	1.3	.27	.12	.05	.01	.01	.00	.00	.00
16	.00	.00	.01	7.3	.27	.12	.06	.01	.01	.00	.00	.00
17	.00	.03	.01	10	.27	.12	.06	.01	.01	.00	.00	.00
18	.00	.01	.02	3.6	.27	.10	.06	.01	.0	.00	.00	.00
19	.00	.00	.02	1.5	.27	.09	.34	.01	.0	.00	.00	.00
20	.00	.06	.01	.97	.29	.09	.40	.01	.0	.00	.00	.00
21	.00	.00	.01	.83	.33	.09	.21	.01	.0	.00	.00	.00
22	.00	.00	.01	.69	.33	.09	.10	.01	.0	.00	.00	.00
23	.00	.00	.01	.60	.33	.09	.44	.01	.0	.00	.00	.00
24	.00	.00	.01	.57	.30	.09	.17	.01	.0	.00	.00	.00
25	.00	.00	.01	.45	.27	.09	.08	.01	.0	.00	.00	.00
26	.00	.00	.01	.45	.30	.09	.06	.01	.0	.00	.00	.00
27	.00	.00	.01	.45	.35	.08	.04	.01	.0	.00	.00	.00
28	.00	.00	.65	.45	.59	.07	.04	.01	.0	.00	.00	.00
29	.00	.00	.67	.81	.34	.07	.03	.01	.00	.00	.00	.00
30	.00	.01	.20	.75	---	.07	.03	.01	.00	.00	.00	.00
31	.00	---	.08	.45	---	.07	---	.01	---	.00	.00	---
TOTAL	0.00	0.14	3.74	38.07	9.52	4.09	2.89	0.49	0.20	0.00	0.00	0.00
MEAN	.00	.005	.12	1.23	.33	.13	.096	.016	.007	.00	.00	.00
MAX	.00	.06	.99	10	.59	.27	.44	.06	.03	.00	.00	.00
MIN	.00	.00	.01	.06	.27	.07	.02	.01	.00	.00	.00	.00
AC-FT	.0	.3	7.4	76	19	8.1	5.7	1.0	.4	.0	.0	.0

CAL YR 1987 TOTAL 170.08 MEAN .47 MAX 58 MIN .00 AC-FT 337
WTR YR 1988 TOTAL 59.14 MEAN .16 MAX 10 MIN .00 AC-FT 117

11180960 CULL CREEK ABOVE CULL CREEK RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1979 to current year (storm season only).
WATER TEMPERATURE: Water years 1979 to current year.
SEDIMENT DATA: Water years 1979 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1978 to current year.
SUSPENDED-SEDIMENT DISCHARGE: October 1978 to current year.

REMARKS.--Zero bedload discharge observed at flows less than 0.51 ft^3/s. Sediment samples were collected on most days where a water temperature is published.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATION: Maximum daily mean, 22,400 mg/L, Feb. 17, 1986; minimum daily mean, no flow many days during most years.
SEDIMENT LOAD: Maximum daily, 26,400 tons, Feb. 17, 1986; minimum daily, 0 ton many days during most years.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION (storm season only): Maximum daily mean, 1,850 mg/L, Jan. 16; minimum daily mean, no flow on many days.
SEDIMENT LOAD: (storm season only): Maximum daily, 92 tons, Jan. 16; minimum daily, 0 ton on many days.

WATER TEMPERATURE, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	4.5	7.0	---	---	---	---	---	---	---
2	---	---	12.0	6.0	---	12.0	10.0	---	---	---	---	---
3	---	---	---	6.0	6.0	---	---	---	---	---	---	---
4	---	---	11.5	8.0	---	10.5	12.5	---	---	---	---	---
5	---	---	---	9.0	6.5	---	---	---	---	---	---	---
6	---	---	---	8.5	---	---	13.5	---	---	---	---	---
7	---	---	10.5	---	---	13.0	---	---	---	---	---	---
8	---	---	10.0	8.5	8.5	---	11.5	---	---	---	---	---
9	---	---	10.5	9.5	---	11.5	---	---	---	---	---	---
10	---	---	13.0	---	10.0	---	---	---	---	---	---	---
11	---	---	---	---	---	10.0	---	---	---	---	---	---
12	---	---	---	7.0	10.0	---	---	---	---	---	---	---
13	---	14.0	6.5	6.5	---	---	12.5	---	---	---	---	---
14	---	---	---	---	10.0	11.5	---	---	---	---	---	---
15	---	---	6.5	8.5	10.5	---	11.0	---	---	---	---	---
16	---	---	7.5	8.0	---	12.0	---	---	---	---	---	---
17	---	12.0	8.0	8.0	10.0	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	7.0	10.0	---	12.5	---	---	---	---	---
20	---	12.0	---	6.5	---	14.5	12.5	---	---	---	---	---
21	---	10.0	---	---	---	---	13.0	---	---	---	---	---
22	---	---	---	6.5	---	14.0	11.0	---	---	---	---	---
23	---	---	---	---	---	---	10.5	---	---	---	---	---
24	---	---	---	---	10.0	14.5	10.5	---	---	---	---	---
25	---	---	---	8.5	---	---	9.5	---	---	---	---	---
26	---	---	---	---	---	---	14.0	---	---	---	---	---
27	---	7.0	---	10.0	---	13.5	14.0	---	---	---	---	---
28	---	---	---	---	13.5	---	13.0	---	---	---	---	---
29	---	---	6.0	9.5	12.0	13.0	11.5	---	---	---	---	---
30	---	9.5	---	9.0	---	9.0	10.0	---	---	---	---	---
31	---	---	---	7.0	---	13.5	---	---	---	---	---	---

SAN LORENZO CREEK BASIN

11180960 CULL CREEK ABOVE CULL CREEK RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	.00	0	.00	.00	0	.00	.01	12	.00
2	.00	0	.00	.00	0	.00	.02	12	.00
3	.00	0	.00	.00	0	.00	.02	12	.00
4	.00	0	.00	.00	0	.00	.09	56	.04
5	.00	0	.00	.00	0	.00	.02	12	.00
6	.00	0	.00	.00	0	.00	.45	78	.24
7	.00	0	.00	.00	0	.00	.15	35	.01
8	.00	0	.00	.00	0	.00	.99	68	.29
9	.00	0	.00	.00	0	.00	.15	10	.00
10	.00	0	.00	.00	0	.00	.04	3	.00
11	.00	0	.00	.00	0	.00	.02	3	.00
12	.00	0	.00	.00	0	.00	.01	4	.00
13	.00	0	.00	.03	240	.06	.01	4	.00
14	.00	0	.00	.00	0	.00	.01	4	.00
15	.00	0	.00	.00	0	.00	.01	4	.00
16	.00	0	.00	.00	0	.00	.01	10	.00
17	.00	0	.00	.03	13	.00	.01	11	.00
18	.00	0	.00	.01	5	.00	.02	10	.00
19	.00	0	.00	.00	0	.00	.02	9	.00
20	.00	0	.00	.06	66	.05	.01	8	.00
21	.00	0	.00	.00	0	.00	.01	7	.00
22	.00	0	.00	.00	0	.00	.01	6	.00
23	.00	0	.00	.00	0	.00	.01	5	.00
24	.00	0	.00	.00	0	.00	.01	5	.00
25	.00	0	.00	.00	0	.00	.01	4	.00
26	.00	0	.00	.00	0	.00	.01	4	.00
27	.00	0	.00	.00	0	.00	.01	5	.00
28	.00	0	.00	.00	0	.00	.65	25	.04
29	.00	0	.00	.00	0	.00	.67	9	.02
30	.00	0	.00	.01	22	.00	.20	8	.00
31	.00	0	.00	---	---	---	.08	7	.00
TOTAL	0.00	---	0.00	0.14	---	0.11	3.74	---	0.64
DAY		JANUARY			FEBRUARY			MARCH	
1	.06	6	.00	.45	12	.01	.27	22	.02
2	.06	8	.00	.39	11	.01	.23	26	.02
3	.17	10	.00	.34	10	.01	.23	23	.01
4	1.1	20	.07	.33	9	.01	.21	20	.01
5	1.6	7	.03	.33	9	.01	.19	23	.01
6	.63	1	.00	.33	9	.01	.19	26	.01
7	.35	2	.00	.33	9	.01	.19	29	.01
8	.38	3	.00	.33	9	.01	.19	24	.01
9	.37	14	.01	.33	4	.00	.16	20	.01
10	.33	12	.01	.33	2	.00	.15	22	.01
11	.73	17	.04	.33	4	.00	.15	24	.01
12	.44	6	.01	.33	6	.01	.15	26	.01
13	.35	6	.01	.32	8	.01	.12	28	.01
14	.33	5	.00	.27	12	.01	.12	30	.01
15	1.3	23	.09	.27	9	.01	.12	27	.01
16	7.3	1850	92	.27	6	.00	.12	24	.01
17	10	363	14	.27	4	.00	.12	24	.01
18	3.6	25	.24	.27	5	.00	.10	24	.01
19	1.5	12	.05	.27	6	.00	.09	24	.01
20	.97	6	.02	.29	6	.00	.09	24	.01
21	.83	7	.02	.33	7	.01	.09	24	.01
22	.69	8	.01	.33	7	.01	.09	24	.01
23	.60	8	.01	.33	6	.01	.09	22	.01
24	.57	9	.01	.30	4	.00	.09	20	.00
25	.45	10	.01	.27	4	.00	.09	20	.00
26	.45	14	.02	.30	5	.00	.09	21	.01
27	.45	18	.02	.35	8	.01	.08	22	.00
28	.45	18	.02	.59	31	.05	.07	26	.00
29	.81	21	.05	.34	19	.02	.07	31	.01
30	.75	8	.02	---	---	---	.07	29	.01
31	.45	10	.01	---	---	---	.07	14	.00
TOTAL	38.07	---	106.78	9.52	---	0.23	4.09	---	0.28

11180960 CULL CREEK ABOVE CULL CREEK RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL	
1	.06	10	.00
2	.06	12	.00
3	.06	20	.00
4	.07	27	.01
5	.07	20	.00
6	.07	14	.00
7	.07	11	.00
8	.06	8	.00
9	.06	10	.00
10	.04	13	.00
11	.03	16	.00
12	.02	19	.00
13	.02	22	.00
14	.03	20	.00
15	.05	18	.00
16	.06	18	.00
17	.06	17	.00
18	.06	17	.00
19	.34	18	.02
20	.40	10	.01
21	.21	6	.00
22	.10	11	.00
23	.44	18	.02
24	.17	10	.00
25	.08	6	.00
26	.06	6	.00
27	.04	5	.00
28	.04	14	.00
29	.03	12	.00
30	.03	14	.00
31	---	---	---
TOTAL	2.89	---	0.06
PERIOD	58.45		108.1

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1987	0.00	0.00	0	0
NOVEMBER	0.14	0.11	0	0
DECEMBER	3.74	0.64	0	1
JANUARY 1988	38.07	106.78	1	108
FEBRUARY	9.52	0.23	0	0
MARCH	4.09	0.28	0	0
APRIL	2.89	0.06	0	0
PERIOD.......	58.45	108.10	1	109

11180960 CULL CREEK ABOVE CULL CREEK RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM
JAN							
15...	1110	2.1	8.5	38	0.22	--	--
16...	0845	6.4	8.0	5870	101	48	61
17...	0830	21	7.5	1750	99	49	57
17...	1235	11	8.0	390	12	--	--
29...	1720	1.0	9.5	24	0.06	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM
JAN							
15...	--	--	--	95	--	--	--
16...	78	93	98	99	100	--	--
17...	66	79	89	94	97	99	100
17...	--	--	--	97	98	99	100
29...	--	--	--	90	--	--	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	TEMPER-ATURE WATER (DEG C)	NUMBER OF SAM-PLING POINTS (COUNT)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
MAR								
30...	1230	12.5	1	0.07	9	28	61	81
30...	1235	12.5	1	0.07	16	35	62	77
30...	1240	12.5	1	0.07	1	3	8	14
30...	1245	12.5	1	0.07	--	--	1	4
30...	1250	12.5	1	0.07	--	1	3	9
30...	1255	12.5	1	0.07	6	15	29	40

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
MAR							
30...	86	89	89	89	90	100	--
30...	82	85	87	87	87	100	--
30...	18	27	44	71	94	100	--
30...	9	22	39	60	80	100	--
30...	15	18	21	25	36	77	100
30...	49	58	64	71	84	100	--

11181008 CASTRO VALLEY CREEK AT HAYWARD, CA

LOCATION.--Lat 37°40'48", long 122°04'46", in San Lorenzo (Castro) Grant, Alameda County, Hydrologic Unit 18050004, on left bank 500 ft east of Hayward City Hall, 700 ft upstream from mouth, and 700 ft downstream from small left-bank tributary.

DRAINAGE AREA.--5.51 mi^2.

PERIOD OF RECORD.--October 1971 to current year (seasonal records only, water years 1975-77).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 100 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: June 28 to Aug. 9 and Sept. 20-22. Records fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--14 years (water years 1972-74, 1978-88), 4.25 ft^3/s, 3,079 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,350 ft^3/s, Jan. 23, 1983, gage height, 8.51 ft, from rating curve extended above 61 ft^3/s on basis of slope-area measurement at gage height 3.92 ft and step-backwater computation to gage height 10.40 ft; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 8	0730	570	5.57	Jan. 16	0845	*762	*6.41

Minimum daily, 0.09 ft^3/s, Aug. 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.19	.45	4.6	.63	.93	1.2	1.2	.51	.39	.23	.21	.13
2	.17	.55	2.2	3.0	.81	.55	.52	.70	.33	.24	.25	.17
3	.18	.13	.42	7.5	.80	.52	.51	.80	.31	.28	.20	.15
4	.18	.13	23	23	.70	.50	.51	.45	.22	.24	.27	.13
5	.21	1.4	2.0	2.6	.69	.53	.55	.47	.34	.23	.28	.13
6	.21	.17	31	1.2	.69	.49	.57	1.9	9.7	.22	.23	.15
7	.17	.16	8.3	2.0	.69	.51	.52	3.0	1.1	.24	.19	.16
8	.16	.14	26	1.1	.71	.49	.57	.50	.35	.26	.17	.16
9	.17	.15	1.9	2.1	.73	.47	.58	.44	.20	.28	.18	.13
10	.16	.11	2.6	2.7	.69	.54	.55	.43	.19	.26	.19	.16
11	.15	.10	.63	3.2	.62	.48	.53	.42	.20	.24	.18	.13
12	.15	.10	.51	.70	.61	.48	.49	.42	.20	.23	.14	.16
13	.15	19	.45	.61	.61	.50	.57	.43	.41	.24	.09	.21
14	.16	.29	.44	.97	.61	.86	4.6	.40	.24	.25	.12	.16
15	.17	.26	1.3	23	.62	.74	.61	.40	.23	.25	.18	.15
16	.18	.24	9.9	48	.60	.48	.54	5.2	.31	.28	.26	.16
17	.18	18	1.4	54	.61	.46	.51	.75	.17	.29	.18	.15
18	.15	.40	.56	3.5	.65	.45	.50	.46	.15	.27	.17	.16
19	.16	.24	.50	1.9	.64	.47	20	.41	.24	.25	.20	.16
20	.18	25	.44	1.5	.63	.48	3.5	.64	.28	.25	.18	.15
21	.21	.53	.43	1.3	.61	.66	.97	.43	.29	.25	.19	.16
22	.20	.34	2.2	1.1	.61	.46	2.9	.40	.28	.25	.19	.16
23	2.2	.25	.46	1.0	.61	.87	15	.39	.24	.23	.19	.15
24	.27	.22	.38	.94	.59	.48	.77	.38	.28	.26	.23	.16
25	.20	.18	.38	.90	.70	.52	.68	.38	.26	.22	.16	.15
26	.13	.20	.38	.87	.61	.54	.63	.40	.25	.23	.17	.16
27	16	.18	11	.85	8.9	.53	.89	.45	.25	.25	.17	.18
28	6.9	.21	29	.80	8.6	.51	.54	.52	.25	.28	.18	.18
29	.30	.20	5.8	14	.67	.70	1.3	.38	.25	.24	.15	.20
30	.29	6.5	1.1	1.5	---	.92	.53	.35	.24	.22	.12	.16
31	.26	---	.74	.98	---	1.2	---	.42	---	.19	.15	---
TOTAL	30.39	75.83	170.02	207.45	35.54	18.59	62.14	23.23	18.15	7.65	5.77	4.72
MEAN	.98	2.53	5.48	6.69	1.23	.60	2.07	.75	.60	.25	.19	.16
MAX	16	25	31	54	8.9	1.2	20	5.2	9.7	.29	.28	.21
MIN	.13	.10	.38	.61	.59	.45	.49	.35	.15	.19	.09	.13
AC-FT	60	150	337	411	70	37	123	46	36	15	11	9.4

CAL YR 1987 TOTAL 932.49 MEAN 2.55 MAX 134 MIN .10 AC-FT 1850
WTR YR 1988 TOTAL 659.48 MEAN 1.80 MAX 54 MIN .09 AC-FT 1310

SAN LORENZO CREEK BASIN

11181040 SAN LORENZO CREEK AT SAN LORENZO, CA

LOCATION.--Lat 37°41'03", long 122°08'20", in San Lorenzo (Soto) Grant, Alameda County, Hydrologic Unit 18050004, on left bank 400 ft downstream from Washington Avenue bridge in San Lorenzo, and 1.6 mi upstream from mouth.

DRAINAGE AREA.--44.6 mi^2.

PERIOD OF RECORD.--October 1967 to September 1978, October 1987 to September 1988.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 6.13 ft above National Geodetic Vertical Datum of 1929 (levels by Alameda County Flood Control and Water Conservation District).

REMARKS.--Estimated daily discharges: Oct. 1-21, 27-29, Nov. 5, 6, 17-22, Dec. 6-9, Dec. 15-29 and Jan. 11, 12. Records fair. Flow partly regulated by Cull Creek Reservoir beginning in October 1962 (capacity, 310 acre-ft) and Don Castro Reservoir (capacity, 380 acre-ft) 7 mi upstream beginning in January 1965. A few very small diversions above station.

AVERAGE DISCHARGE.--12 years (water years 1968-78, 1988), 19.5 ft^3/s, 14,130 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,960 ft^3/s, Apr. 1, 1974, gage height, 8.22 ft from rating curve extended above 1,200 ft^3/s; minimum daily, 0.01 ft^3/s, June 30, July 1, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 830 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 13	1045	*606	*4.99				

Minimum daily, 0.09 ft^3/s, Nov. 11, 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.68	.13	7.4	3.1	.80	3.2	2.3	.26	2.0	1.3	.37	.16
2	.64	.35	9.7	5.8	.71	2.0	1.8	.45	2.0	1.3	.44	.26
3	.66	.18	2.4	21	.65	1.8	1.7	.73	1.7	1.4	.44	.22
4	.67	.16	47	39	.58	1.7	1.9	.42	1.5	1.4	.53	.21
5	.75	1.9	13	15	.57	1.8	2.2	.39	1.6	1.7	.62	.22
6	.74	.94	59	4.7	.59	1.8	2.4	.65	19	1.7	.44	.24
7	.66	.21	17	5.0	.60	1.7	2.4	8.8	12	1.7	.45	.25
8	.64	.13	49	5.3	.67	1.7	2.6	1.1	1.7	1.9	.49	.28
9	.66	.13	22	5.6	.85	1.6	2.7	.68	.97	2.2	.52	.24
10	.63	.11	6.6	5.1	1.4	1.6	3.1	.59	.76	2.3	.62	.27
11	.60	.09	2.5	6.6	1.2	1.6	3.6	.67	.65	2.8	.63	.27
12	.58	.09	1.5	4.4	1.4	1.6	5.0	.65	.58	3.0	.59	.29
13	.58	33	1.3	4.2	1.6	1.6	6.3	1.0	.73	3.6	.53	.43
14	.60	1.4	1.3	4.1	1.8	2.1	16	.71	.51	3.9	.59	.41
15	.64	.23	1.3	50	2.0	2.6	4.9	.75	.55	4.5	.67	.39
16	.66	2.2	3.1	130	2.1	2.2	2.5	7.3	.65	3.7	.86	.45
17	.66	29	6.7	101	2.1	1.9	1.9	4.7	.57	3.3	.40	.43
18	.60	4.0	1.8	20	2.1	1.9	1.9	1.8	.61	2.3	.42	.46
19	.64	.58	.99	8.6	2.2	2.0	39	1.7	.72	1.9	.45	.45
20	.70	44	.84	4.4	2.2	2.1	12	2.0	.77	1.5	.51	.61
21	.86	38	2.4	2.2	2.5	2.2	8.9	1.4	.79	1.0	.42	.60
22	1.6	.67	4.0	1.5	2.8	2.4	6.8	1.3	.96	.99	.39	.40
23	3.6	.33	2.4	1.1	3.2	2.7	31	1.5	.89	.85	.34	.38
24	.69	.25	1.2	.92	3.4	2.1	.88	1.9	2.8	.76	.41	.45
25	.48	.19	1.1	.75	3.9	1.9	.50	2.1	.84	.84	.28	.33
26	.29	.20	1.1	.74	3.9	1.9	.63	2.3	.93	.96	.27	.33
27	27	.19	5.0	.67	6.6	1.9	.47	2.3	1.9	.71	.25	.46
28	11	.19	49	.67	31	1.9	.31	2.5	.94	.61	.23	.40
29	3.6	.16	30	15	2.6	2.0	1.0	2.4	1.1	.58	.21	.36
30	1.5	2.8	9.2	6.8	---	1.9	.36	2.2	1.1	.48	.16	.34
31	.18	---	3.8	.98	---	2.1	---	2.1	---	.44	.26	---
TOTAL	63.79	161.81	363.63	474.23	86.02	61.5	167.05	57.35	61.82	55.62	13.79	10.59
MEAN	2.06	5.39	11.7	15.3	2.97	1.98	5.57	1.85	2.06	1.79	.44	.35
MAX	27	44	59	130	31	3.2	39	8.8	19	4.5	.86	.61
MIN	.18	.09	.84	.67	.57	1.6	.31	.26	.51	.44	.16	.16
AC-FT	127	321	721	941	171	122	331	114	123	110	27	21

WTR YR 1988 TOTAL 1577.20 MEAN 4.31 MAX 130 MIN .09 AC-FT 3130

11181390 WILDCAT CREEK AT VALE ROAD, AT RICHMOND, CA

LOCATION.--Lat 37°57'12", long 122°20'14", in San Pablo Grant, Contra Costa County, Hydrologic Unit 18050002, on left bank at upstream side of Vale Road bridge at Richmond, 3.6 mi upstream from mouth.

DRAINAGE AREA.--7.79 mi^2.

PERIOD OF RECORD.--October 1975 to current year.

REVISED RECORDS.--WDR CA-81-2: 1979-80(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 65.56 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. Minor storage in Lake Anza and Jewel Lake 5 mi upstream. No diversion above station.

AVERAGE DISCHARGE.--13 years, 5.43 ft^3/s, 3,930 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,050 ft^3/s, Jan. 4, 1982, gage height, 14.68 ft, 15.80 ft from floodmarks, from rating curve extended above 400 ft^3/s on basis of slope-area measurement of peak flow; no flow Aug. 31, Sept. 6, 7, 1979, and many days during 1987-88.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	0928	*74	*3.63				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.07	.37	1.7	1.6	.55	.27	.04	.06	.0	.0	.0
2	.01	.07	.93	2.3	1.3	.50	.05	.02	.05	.0	.0	.0
3	.01	.09	.60	5.7	1.0	.38	.03	.03	.06	.0	.0	.0
4	.01	.05	2.1	15	.86	.32	.03	.03	.04	.0	.0	.0
5	.01	.05	1.8	9.4	.75	.32	.03	.01	.03	.0	.01	.0
6	.0	.05	6.9	3.4	.67	.42	.03	.03	2.7	.0	.0	.0
7	.0	.05	3.7	2.4	.67	.36	.03	.64	1.7	.0	.01	.0
8	.0	.05	6.9	2.2	.67	.32	.03	.20	.22	.0	.0	.0
9	.0	.11	3.6	1.7	.66	.28	.03	.07	.07	.0	.01	.0
10	.0	.07	2.8	2.3	.58	.27	.03	.05	.03	.0	.0	.0
11	.0	.06	2.0	2.2	.58	.27	.03	.03	.03	.0	.01	.0
12	.0	.05	.95	1.8	.58	.29	.05	.01	.02	.0	.01	.0
13	.0	.76	.55	1.9	.52	.27	.04	.01	.02	.01	.01	.0
14	.0	.07	.33	1.6	.50	.27	.41	.01	.01	.0	.0	.0
15	.0	.07	.67	5.4	.41	.27	.02	.01	.02	.01	.0	.0
16	.0	.06	2.5	13	.37	.27	.02	.19	.02	.01	.0	.0
17	.0	1.7	2.5	32	.37	.24	.02	.19	.02	.01	.0	.0
18	.0	.09	1.2	9.2	.41	.23	.02	.12	.01	.0	.0	.0
19	.0	.08	.63	3.7	.42	.28	5.0	.07	.03	.01	.0	.00
20	.0	2.0	.44	2.5	.39	.22	2.2	.06	.04	.01	.0	.00
21	.0	.48	.30	1.9	.37	.15	.53	.06	.02	.01	.0	.0
22	.01	.31	.27	1.7	.37	.15	1.4	.04	.01	.01	.0	.0
23	.01	.15	.27	1.2	.37	.15	1.5	.04	.02	.01	.0	.0
24	.0	.08	.24	.97	.38	.15	.35	.04	.02	.01	.01	.0
25	.0	.07	.28	.79	.43	.25	.18	.05	.01	.01	.01	.0
26	.0	.06	.19	.77	.43	.23	.13	.03	.01	.01	.01	.0
27	1.9	.05	1.0	.76	.78	.09	.09	.04	.01	.01	.01	.0
28	1.3	.05	4.9	1.0	2.6	.19	.08	.04	.0	.01	.01	.0
29	.11	.06	6.5	9.5	.87	.27	.17	.04	.0	.01	.0	.0
30	.07	1.2	3.1	6.4	---	.31	.07	.04	.01	.01	.0	.0
31	.07	---	1.7	2.4	---	.32	---	.04	---	.00	.0	---
TOTAL	3.52	8.11	60.22	146.79	19.91	8.54	12.87	2.28	5.29	0.16	0.11	0.00
MEAN	.11	.27	1.94	4.74	.69	.28	.43	.074	.18	.005	.004	.00
MAX	1.9	2.0	6.9	32	2.6	.55	5.0	.64	2.7	.01	.01	.00
MIN	.00	.05	.19	.76	.37	.09	.02	.01	.00	.00	.00	.00
AC-FT	7.0	16	119	291	39	17	26	4.5	10	.3	.2	.0

CAL YR 1987 TOTAL 757.07 MEAN 2.07 MAX 165 MIN .00 AC-FT 1500
WTR YR 1988 TOTAL 267.80 MEAN .73 MAX 32 MIN .00 AC-FT 531

RHEEM CREEK BASIN

11182030 RHEEM CREEK AT SAN PABLO, CA

LOCATION.--Lat 37°58'38", long 122°21'10", in San Pablo Grant, Contra Costa County, Hydrologic Unit 18050002, on left bank 50 ft downstream from Santa Fe Railway bridge at San Pablo and 0.7 mi upstream from mouth.

DRAINAGE AREA.--1.49 mi^2.

PERIOD OF RECORD.--December 1960 to current year.

REVISED RECORDS.--WDR CA-72-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 13.63 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Aug. 13, 1965, at site 0.2 mi upstream at datum 7.74 ft higher.

REMARKS.--No estimated daily discharges. Records poor. Low flow affected by return flow from industrial waste, leakage, and infrequent releases from off-stream North Reservoir.

AVERAGE DISCHARGE.--27 years (water years 1962-88), 1.52 ft^3/s, 1,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 477 ft^3/s, Dec. 20, 1969, gage height, 6.95 ft, from rating curve extended above 150 ft^3/s; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 180 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 16	0815	*279	*5.83				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.01	.82	.10	.15	.07	.06	.02	.01	.00	.00	.00
2	.0	.15	1.5	2.3	.12	.06	.06	.02	.03	.00	.00	.00
3	.02	.12	.09	11	.10	.05	.04	.03	.01	.00	.00	.00
4	.03	.01	7.2	18	.09	.05	.03	.02	.01	.00	.00	.00
5	.03	.01	2.4	2.0	.09	.05	.03	.02	.0	.00	.00	.00
6	.01	.01	11	.73	.09	.05	.04	.21	9.2	.00	.00	.00
7	.01	.0	1.3	1.1	.09	.05	.04	5.8	3.5	.00	.00	.00
8	.01	.0	12	.37	.09	.05	.03	.13	.10	.00	.00	.00
9	.0	.50	2.6	.23	.07	.05	.05	.06	.04	.00	.00	.00
10	.00	.01	.54	1.6	.33	.04	.05	.03	.05	.00	.00	.00
11	.02	.01	.14	.76	.07	.10	.03	.03	.03	.00	.00	.00
12	.01	.01	.07	.20	.07	.05	.05	.03	.05	.00	.00	.00
13	.01	3.2	.04	.16	.07	.05	.06	.02	.06	.00	.00	.00
14	.0	.03	.03	.38	.07	.04	.69	.02	1.0	.00	.00	.00
15	.0	.01	2.0	6.5	.08	.06	.04	.06	.04	.00	.00	.00
16	.0	.01	8.5	25	.08	.04	.04	1.8	.02	.00	.00	.00
17	.0	7.8	1.5	22	.08	.04	.03	.09	.01	.00	.00	.00
18	.01	.08	.18	1.7	.07	.06	.03	.06	.01	.00	.00	.00
19	.01	.02	.11	.61	.13	.06	16	.04	.0	.00	.00	.00
20	.01	7.9	.07	.33	.09	.06	.67	.05	.00	.00	.00	.00
21	.01	.13	.05	.24	.09	.03	.08	.05	.00	.04	.00	.00
22	.12	.03	.12	.16	.08	.04	3.8	.05	.00	.0	.00	.00
23	.07	.02	.04	.16	.11	.03	1.9	.03	.00	.00	.00	.00
24	.03	.02	.03	.15	.10	.03	.06	.01	.00	.00	.00	.00
25	.01	.01	.04	.13	.07	.03	.04	.38	.00	.00	.00	.00
26	.01	.01	.03	.14	.07	.06	.03	.02	.00	.00	.00	.00
27	6.6	.01	3.9	.14	1.5	.19	.03	.04	.00	.00	.00	.00
28	7.5	.01	11	.69	5.6	.04	.02	.04	.00	.00	.00	.00
29	.14	.01	2.8	9.4	.09	.08	.44	.03	.00	.00	.00	.00
30	.03	5.2	.40	.46	---	.03	.02	.01	.00	.00	.00	.00
31	.02	---	.16	.20	---	.02	---	.06	---	.00	.00	---
TOTAL	14.73	25.34	70.66	106.94	9.74	1.66	24.49	9.26	14.17	0.04	0.00	0.00
MEAN	.48	.84	2.28	3.45	.34	.054	.82	.30	.47	.001	.00	.00
MAX	7.5	7.9	12	25	5.6	.19	16	5.8	9.2	.04	.00	.00
MIN	.00	.00	.03	.10	.07	.02	.02	.01	.00	.00	.00	.00
AC-FT	29	50	140	212	19	3.3	49	18	28	.08	.0	.0

CAL YR 1987 TOTAL 366.50 MEAN 1.00 MAX 49 MIN .00 AC-FT 727
WTR YR 1988 TOTAL 277.03 MEAN .76 MAX 25 MIN .00 AC-FT 549

11182400 ARROYO DEL HAMBRE AT MARTINEZ, CA

LOCATION.--Lat 38°00'12", long 122°07'44", in Las Juntas Grant, Contra Costa County, Hydrologic Unit 18050001, on right bank 40 ft upstream from D Street Bridge in Martinez.

DRAINAGE AREA.--15.1 mi^2.

PERIOD OF RECORD.--
DAILY STREAMFLOW DATA: Water years 1965-82.
CHEMICAL DATA: Water years 1971, October 1987 to September 1988.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
APR 22...	1315	0.63	1240	7.80	13.5	755	19	7.8	76	12	430
MAY 09...	0845	0.47	1530	7.80	13.5	--	6.4	--	--	31	530
JUN 08...	0845	0.18	1180	7.50	13.5	765	14	4.4	42	110	390
JUL 07...	0930	0.06	[1]1030	7.80	18.0	760	1.1	4.2	44	18	310
AUG 09...	0930	0.05	1560	7.50	17.5	760	5.5	3.0	32	20	550

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER WH IT FIELD MG/L AS HCO3	CAR-BONATE WATER WH IT FIELD MG/L AS CO3	ALKA-LINITY WAT WH TOT IT FIELD MG/L AS CACO3	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3
APR 22...	90	98	44	120	38	3	3.6	414	0	339	336
MAY 09...	160	120	55	160	40	3	2.9	447	0	366	362
JUN 08...	140	87	42	120	40	3	3.3	303	0	248	246
JUL 07...	0	59	40	120	45	3	2.0	--	--	[1]315	--
AUG 09...	69	120	61	150	37	3	1.9	595	0	488	482

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)
APR 22...	220	110	15	822	817	1.12	1.00	0.11	0.7	0.6	0.16
MAY 09...	290	160	15	1010	1020	1.37	0.63	0.06	0.4	0.3	0.11
JUN 08...	240	110	12	805	762	1.09	--	--	0.9	0.9	0.15
JUL 07...	98	91	20	618	622	0.84	0.52	0.04	1.0	0.6	0.15
AUG 09...	240	140	16	1010	1020	1.37	0.50	0.11	0.4	0.4	0.18

See footnote at end of table.

ARROYO DEL HAMBRE BASIN

11182400 ARROYO DEL HAMBRE AT MARTINEZ, CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)
APR 22...	0.15	0.11	0.11	1300	<10	3	1	2	<1	5	2
MAY 09...	0.02	0.09	0.08	500	<10	2	--	<1	--	5	1
JUN 08...	0.12	0.08	--	680	10	1	1	3	1	8	4
JUL 07...	0.15	0.10	0.10	30	20	5	5	1	<1	5	2
AUG 09...	0.06	0.10	0.11	330	<10	3	2	<1	<1	7	5

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
APR 22...	1900	19	<5	<5	260	210	<0.1	<0.10	9	4	20
MAY 09...	760	11	<5	<5	260	210	<0.1	--	13	5	<10
JUN 08...	1100	53	<5	<5	380	260	<0.1	<0.10	11	5	<10
JUL 07...	60	22	<5	<5	130	110	<0.1	<0.10	4	3	50
AUG 09...	720	360	<5	<5	500	460	<0.1	<0.10	3	6	10

DATE	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE DIS-SOLVED (MG/L AS CN)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI-METRIC (MG/L)	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)
APR 22...	17	6.4	<0.01	<0.01	1	0.30	<0.10	<0.01	<0.10	<0.01	<0.01
MAY 09...	<3	5.8	<0.01	<0.01	3	<1	<0.10	<0.01	<0.10	<0.01	<0.01
JUN 08...	7	16	<0.01	<0.01	2	<1	<0.10	<0.01	<0.10	<0.01	<0.01
JUL 07...	14	5.8	--	--	2	<1	<0.10	<0.01	<0.10	<0.01	<0.01
AUG 09...	6	4.7	<0.01	<0.01	1	<1	<0.10	<0.01	<0.10	<0.01	<0.01

DATE	DDT, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)
APR 22...	<0.01	0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01
MAY 09...	<0.01	0.08	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.04
JUN 08...	<0.01	0.17	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.06
JUL 07...	<0.01	3.3	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
AUG 09...	<0.01	0.06	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

See footnote at end of table.

ARROYO DEL HAMBRE BASIN

11182400 ARROYO DEL HAMBRE AT MARTINEZ, CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	METH-OXY-CHLOR, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
APR										
22...	<0.01	<0.01	<0.01	<0.01	<1	<0.01	<0.01	<0.01	<0.5	<0.01
MAY										
09...	<0.01	<0.01	<0.01	<0.01	<1	<0.01	<0.01	<0.01	<0.5	<0.01
JUN										
08...	<0.01	<0.01	<0.01	<0.01	<1	<0.01	0.14	<0.01	<0.5	<0.01
JUL										
07...	<0.01	<0.01	<0.01	<0.01	<1	<0.01	<0.01	<0.01	<0.5	<0.01
AUG										
09...	<0.01	<0.01	<0.01	<0.01	<1	<0.01	<0.02	<0.02	<0.5	<0.02

[1] Laboratory value.

< Actual value is known to be less than the value shown.

11182500 SAN RAMON CREEK AT SAN RAMON, CA

LOCATION.--Lat 37°46'23", long 121°59'37", in sec.8, T.2 S., R.1 W., Contra Costa County, Hydrologic Unit 18050001, on right bank 0.2 mi downstream from Bollinger Creek and 1.0 mi southwest of San Ramon.

DRAINAGE AREA.--5.89 mi^2.

PERIOD OF RECORD.--October 1952 to current year.

REVISED RECORDS.--WSP 1445: 1953-54(P).

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 530 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--36 years, 3.25 ft^3/s, 2,350 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,600 ft^3/s, Oct. 13, 1962, gage height, 16.98 ft, from rating curve extended above 200 ft^3/s on basis of culvert computations at gage heights 11.80, 12.09, 14.20, and 16.98 ft; no flow for parts of most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 16	1015	*62	*2.73				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.0	.02	.36	.31	.70	.53	.21	.14	.03	.01	.0	.00
2	.0	.02	.56	.34	.68	.44	.21	.14	.01	.01	.0	.0
3	.0	.02	.22	.97	.62	.42	.22	.14	.01	.01	.0	.0
4	.0	.02	.72	2.7	.62	.42	.25	.15	.01	.01	.0	.0
5	.0	.02	.64	1.6	.62	.42	.22	.14	.01	.01	.0	.0
6	.0	.02	3.4	.66	.60	.42	.20	.16	.03	.01	.0	.0
7	.0	.02	1.1	.58	.56	.42	.19	.29	.43	.0	.00	.0
8	.0	.02	2.2	.87	.55	.40	.18	.21	.13	.0	.0	.0
9	.0	.02	.61	.55	.55	.36	.16	.15	.07	.0	.0	.0
10	.0	.02	.83	.53	.55	.36	.14	.12	.04	.0	.0	.0
11	.0	.01	.39	1.5	.54	.36	.14	.10	.03	.01	.0	.00
12	.0	.02	.26	.60	.54	.36	.13	.07	.03	.01	.0	.0
13	.0	.37	.19	.50	.54	.36	.18	.08	.02	.01	.0	.0
14	.0	.19	.21	.48	.48	.36	.27	.07	.03	.01	.00	.0
15	.0	.03	.26	1.5	.48	.36	.24	.04	.03	.01	.0	.0
16	.0	.02	.42	11	.48	.34	.22	.10	.03	.01	.0	.0
17	.0	1.1	.72	19	.42	.33	.22	.15	.03	.01	.0	.0
18	.0	.37	.28	4.7	.45	.31	.19	.09	.03	.01	.0	.00
19	.0	.15	.24	2.2	.42	.31	.93	.06	.02	.01	.0	.0
20	.0	1.2	.22	1.4	.45	.31	.76	.03	.02	.01	.0	.0
21	.0	.43	.22	1.2	.43	.31	.58	.02	.02	.0	.00	.0
22	.0	.18	.37	.91	.44	.31	.32	.02	.02	.0	.0	.0
23	.0	.14	.24	.87	.45	.33	.96	.02	.02	.0	.0	.0
24	.00	.12	.19	.79	.42	.31	.34	.02	.02	.0	.0	.0
25	.0	.09	.19	.78	.45	.29	.26	.02	.02	.0	.0	.0
26	.0	.07	.19	.73	.43	.27	.23	.03	.02	.0	.0	.0
27	.05	.06	.24	.70	.44	.25	.21	.03	.01	.0	.0	.0
28	.62	.11	1.6	.70	.79	.23	.22	.06	.01	.0	.00	.0
29	.16	.10	1.1	1.5	.52	.25	.21	.13	.01	.00	.0	.0
30	.02	.18	.45	1.1	---	.24	.15	.05	.01	.0	.00	.0
31	.02	---	.33	.76	---	.21	---	.02	---	.00	.0	---
TOTAL	0.87	5.14	18.95	62.03	15.22	10.59	8.74	2.85	1.20	0.16	0.00	0.00
MEAN	.028	.17	.61	2.00	.52	.34	.29	.092	.040	.005	.00	.00
MAX	.62	1.2	3.4	19	.79	.53	.96	.29	.43	.01	.00	.00
MIN	.00	.01	.19	.31	.42	.21	.13	.02	.01	.00	.00	.00
AC-FT	1.7	10	38	123	30	21	17	5.7	2.4	.3	.0	.0

CAL YR 1987	TOTAL 207.64	MEAN .57	MAX 56	MIN .00	AC-FT 412
WTR YR 1988	TOTAL 125.75	MEAN .34	MAX 19	MIN .00	AC-FT 249

11182800 SAN RAMON CREEK NEAR WALNUT CREEK, CA

LOCATION.--Lat 37°52'38", long 122°02'52", in San Ramon Grant, Contra Costa County, Hydrologic Unit 18050001, on left bank 600 ft upstream from Rudgear Road, near south city limits of town of Walnut Creek.

DRAINAGE AREA.--47.9 mi^2.

PERIOD OF RECORD.--October 1973 to current year. Prior to October 1987, published as San Ramon Creek at Walnut Creek.

REVISED RECORDS.--WDR CA-79-2: 1978. WDR CA-84-2: 1974-75(P), 1978-80(P).

GAGE.--Water-stage recorder and crest-stage gage. Concrete control. Datum of gage is 169.98 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. No regulation; pumping for irrigation above station during periods of low flow.

AVERAGE DISCHARGE.--15 years, 25.4 ft^3/s, 18,130 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,400 ft^3/s, Jan. 5, 1982, gage height, 15.55 ft, from rating curve extended above 1,400 ft^3/s on basis of slope-area measurement of peak flow ; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 28	1630	*2,910	*6.58				

Minimum daily, 0.50 ft^3/s, Sept. 15.

REVISIONS.--The peak discharges and annual maximums (*) for water years 1974-75, 1978-80 and 1982-87 have been revised as shown in the following table. They supersede figures published in the reports for 1982-87, and revised figures for water years 1974-75 and 1978-80 published in the report for 1984.

Water Year	Date	Time	Discharge (ft^3/s)	Gage height (ft)
1974	Dec. 1, 1973	0115	2,670	6.30
	Mar. 1, 1974	2200	3,120	7.05
	Mar. 28, 1974	0230	1,790	5.45
	Mar. 30, 1974	0500	1,280	4.84
	Apr. 1, 1974	1400	*3,280	*7.40
1975	Mar. 21, 1975	2030	*3,260	*7.37
	Mar. 25, 1975	0400	1,980	5.66
1978	Jan. 14, 1978	2030	1,740	5.40
	Jan. 16, 1978	1145	*2,930	*6.62
	Jan. 19, 1978	0715	1,310	4.88
	Feb. 7, 1978	1145	2,360	6.02
	Mar. 8, 1978	unknown	1,400	5.00
1979	Jan. 11, 1979	1245	*1,790	*5.45
	Jan. 15, 1979	0200	1,520	5.14
	Feb. 21, 1979	0415	1,450	5.06
1980	Dec. 24, 1979	1715	1,090	4.58
	Jan. 13, 1980	1930	*3,680	*8.32
	Feb. 16, 1980	2015	2,300	5.97
	Feb. 19, 1980	0545	2,920	6.61
	Feb. 21, 1980	0545	1,580	5.22
1982	Nov. 12, 1981	2315	1,480	5.09
	Dec. 20, 1981	0115	1,640	5.29
	Dec. 29, 1981	1745	1,690	5.34
	Feb. 16, 1982	0145	3,610	8.16
	Mar. 26, 1982	1645	2,030	5.71
	Mar. 31, 1982	0930	3,370	7.61
	Apr. 11, 1982	0245	1,360	4.94
1983	Nov. 18, 1982	1015	1,550	5.18
	Nov. 30, 1982	0200	2,640	6.27
	Dec. 22, 1982	1430	*4,120	*9.29
	Jan. 24, 1983	0115	3,280	7.40
	Jan. 26, 1983	1945	3,250	7.34
	Mar. 13, 1983	0645	3,840	8.66
	Mar. 17, 1983	0415	1,270	4.83
	Mar. 23, 1983	1945	2,280	5.95
1984	Nov. 24, 1983	1315	*2,320	*5.99
	Dec. 24, 1983	1315	1,940	5.61
1985	Feb. 8, 1985	0845	*2,580	*6.22
	Mar. 26, 1985	1900	1,080	4.57
1986	Feb. 17, 1986	1945	*3,720	*8.39
	Mar. 10, 1986	0915	1,460	5.07
1987	Feb. 13, 1987	0530	*2,370	*6.03

NOTE.--Peak discharge above base discharge of 1,000 ft^3/s may have occurred Feb. 7, 27, and Mar. 2, 1983.

11183000 SAN RAMON CREEK AT WALNUT CREEK, CA--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	3.6	9.6	7.2	8.2	14	4.0	5.2	2.4	1.4	.99	.65
2	2.1	3.8	14	7.9	7.6	7.6	4.1	5.2	2.5	1.6	.83	.67
3	2.1	3.6	4.9	51	7.1	6.9	4.1	5.5	2.4	1.4	1.2	.62
4	2.1	3.2	52	93	6.8	6.8	4.6	5.0	2.7	1.3	1.1	.62
5	2.3	3.2	17	32	6.8	6.1	4.9	4.7	2.9	1.2	1.3	.63
6	2.2	3.6	130	13	6.8	6.0	4.3	4.6	4.3	1.3	.87	.66
7	2.4	3.5	36	12	6.8	6.2	4.1	5.1	11	1.3	.74	.63
8	2.5	3.1	76	18	6.8	6.5	4.1	5.7	5.3	1.4	.81	.68
9	2.6	3.0	17	9.3	6.8	6.3	4.1	4.6	3.8	1.4	.88	.68
10	2.6	2.9	17	9.3	6.6	6.1	4.0	4.3	3.0	1.3	.92	.68
11	2.6	2.8	8.5	24	6.4	5.8	4.3	3.9	2.9	1.2	.86	.68
12	3.0	2.8	6.6	9.0	6.6	5.8	4.0	3.5	3.1	1.2	.75	.64
13	2.6	22	5.8	7.9	6.6	5.3	4.0	3.3	3.1	1.3	.84	.53
14	2.6	5.6	5.5	7.4	6.4	4.9	7.0	3.3	2.5	1.3	.81	.54
15	2.5	3.8	8.2	44	6.6	5.0	5.9	3.0	2.3	1.4	.81	.50
16	2.5	3.5	23	177	6.1	5.0	5.1	3.5	2.2	1.4	.81	.54
17	2.5	43	21	206	5.9	4.6	5.0	5.9	2.2	1.4	.81	.60
18	2.6	7.9	7.1	32	5.7	5.0	4.9	4.3	2.1	1.3	.81	.56
19	2.4	4.6	6.4	20	5.7	5.3	52	4.0	2.0	1.3	.84	.56
20	2.4	50	6.1	13	5.7	5.5	42	3.6	2.0	1.3	.87	.56
21	2.6	10	5.7	12	5.9	5.2	29	2.9	2.0	1.3	.81	.56
22	3.1	4.8	11	10	6.1	5.6	13	2.8	1.9	1.2	.76	.57
23	4.7	4.2	6.4	9.6	6.4	5.5	27	2.9	1.7	1.3	.74	.72
24	6.7	3.8	5.6	8.9	6.4	5.8	8.4	2.8	1.7	1.1	.76	.60
25	3.7	3.9	5.1	8.6	6.1	5.9	7.1	2.8	1.8	1.1	.81	.58
26	3.1	3.3	5.1	8.2	6.1	5.8	7.1	2.5	1.6	1.1	.73	.62
27	4.4	3.4	6.2	8.6	6.1	5.2	7.1	2.5	1.7	1.3	.66	.62
28	257	3.4	85	8.2	25	4.5	6.7	2.6	1.6	1.2	.62	.62
29	14	3.2	42	28	8.8	4.3	6.6	2.6	1.4	1.0	.62	.71
30	5.6	9.6	11	12	---	4.3	5.7	2.4	1.3	1.0	.62	.79
31	4.1	---	8.0	8.6	---	4.3	---	2.4	---	.75	.62	---
TOTAL	357.9	229.1	662.8	915.7	208.9	181.1	294.2	117.4	81.4	39.05	25.60	18.62
MEAN	11.5	7.64	21.4	29.5	7.20	5.84	9.81	3.79	2.71	1.26	.83	.62
MAX	257	50	130	206	25	14	52	5.9	11	1.6	1.3	.79
MIN	2.1	2.8	4.9	7.2	5.7	4.3	4.0	2.4	1.3	.75	.62	.50
AC-FT	710	454	1310	1820	414	359	584	233	161	77	51	37

CAL YR 1987 TOTAL 4406.8 MEAN 12.1 MAX 577 MIN 2.1 AC-FT 8740
WTR YR 1988 TOTAL 3131.77 MEAN 8.56 MAX 257 MIN .50 AC-FT 6210

PACHECO CREEK BASIN

11183600 WALNUT CREEK AT CONCORD, CA

LOCATION.--Lat 37°56'43", long 122°02'55", in Arroyo de las Nueces y Bolbones Grant, Contra Costa County, Hydrologic Unit 18050001, on right bank at southwest city limits of Concord, 0.2 mi upstream from Southern Pacific railroad bridge, 3.8 mi downstream from confluence of San Ramon and Las Trampas Creeks, and 10 mi downstream from Lafayette Reservoir.

DRAINAGE AREA.--85.2 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1968 to current year.

REVISED RECORDS.--WDR CA-79-2: Drainage area. WDR CA-82-2: 1969(M), 1970(M), 1973(P), 1975(M), 1978(M), 1980(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 35.44 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Estimated daily discharge: July 6. Records good. Flow slightly regulated by Lafayette Reservoir, capacity, 4,240 acre-ft. Some small diversions for irrigation above station.

AVERAGE DISCHARGE.--20 years, 52.1 ft^3/s, 37,750 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,300 ft^3/s, Jan. 5, 1982, gage height, 19.1 ft, from rating curve extended above 3,000 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 0.70 ft^3/s, Oct. 7, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 28	1715	*3,390	*7.93				

Minimum daily, 2.4 ft^3/s, Sept. 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	15	28	17	20	25	10	9.5	6.9	4.0	3.4	2.9
2	5.7	8.4	39	26	18	16	10	9.0	6.7	4.0	3.1	2.8
3	6.1	11	13	113	17	13	10	9.9	6.5	3.5	3.0	2.7
4	5.9	10	78	166	17	13	10	8.9	6.6	3.9	3.5	3.1
5	6.1	7.5	39	79	16	12	11	8.4	6.2	3.5	3.2	3.2
6	5.7	7.7	233	37	16	13	10	8.7	19	3.3	3.5	3.2
7	5.5	7.8	66	34	16	13	10	11	43	3.2	2.8	2.7
8	5.8	7.3	115	45	16	13	9.9	12	12	3.3	2.9	2.8
9	16	7.5	33	28	16	14	9.6	9.5	8.9	3.7	3.1	2.8
10	10	7.4	33	27	15	14	9.0	8.8	7.3	3.5	3.1	2.8
11	7.3	7.2	18	55	15	13	9.1	8.3	6.6	3.3	3.2	2.8
12	18	7.0	14	27	15	13	9.1	7.5	6.4	3.2	3.2	2.7
13	6.7	49	12	27	15	13	9.0	7.4	7.0	3.4	3.2	3.0
14	6.1	16	12	23	14	13	13	7.4	5.9	3.5	3.1	2.9
15	6.4	9.2	18	90	15	13	16	7.5	5.8	3.1	3.2	2.7
16	6.8	8.5	63	325	14	14	12	9.9	5.6	3.0	3.2	3.0
17	15	78	48	376	13	14	11	12	5.8	3.2	3.3	2.7
18	7.8	23	17	92	14	14	21	9.2	5.5	3.2	3.2	2.5
19	6.1	12	14	46	13	13	112	8.4	5.6	3.0	3.1	2.4
20	6.1	81	13	34	13	12	39	8.1	4.8	2.9	3.0	2.5
21	6.6	27	12	30	13	11	45	7.0	5.0	2.9	2.8	2.7
22	13	12	21	27	14	11	23	6.2	5.0	2.8	2.9	2.8
23	17	11	13	25	14	11	72	6.4	4.6	2.9	2.8	2.8
24	22	10	12	24	14	12	16	6.0	4.5	2.9	2.7	2.8
25	20	10	12	23	14	11	13	6.0	4.6	2.8	2.8	2.7
26	17	10	12	20	14	11	12	5.9	4.6	2.9	3.0	2.8
27	19	10	18	19	14	11	12	5.9	4.4	3.7	3.1	2.7
28	359	11	151	20	52	11	11	6.3	4.5	4.0	2.7	2.8
29	37	10	77	74	17	9.7	11	9.0	4.1	3.8	2.6	2.5
30	14	23	26	28	---	9.6	10	8.9	4.0	3.4	3.0	2.5
31	12	---	19	21	---	11	---	6.3	---	3.6	3.0	---
TOTAL	695.8	514.5	1279	1978	474	397.3	575.7	255.3	227.4	103.4	94.7	83.3
MEAN	22.4	17.1	41.3	63.8	16.3	12.8	19.2	8.24	7.58	3.34	3.05	2.78
MAX	359	81	233	376	52	25	112	12	43	4.0	3.5	3.2
MIN	5.5	7.0	12	17	13	9.6	9.0	5.9	4.0	2.8	2.6	2.4
AC-FT	1380	1020	2540	3920	940	788	1140	506	451	205	188	165

CAL YR 1987 TOTAL 8515.6 MEAN 23.3 MAX 1090 MIN 5.5 AC-FT 16890
WTR YR 1988 TOTAL 6678.4 MEAN 18.2 MAX 376 MIN 2.4 AC-FT 13250

PACHECO CREEK BASIN

11183600 WALNUT CREEK AT CONCORD, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1977, October 1987 to September 1988.
SEDIMENT DATA: Water year 1970.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
APR 21...	1330	25	341	8.20	17.0	755	39	9.10	95	<10	110
MAY 09...	1245	9.5	1050	8.20	16.0	--	0.6	--	--	<10	360
JUN 08...	1130	12	780	7.80	15.0	765	2.4	11.0	109	97	250
JUL 07...	1330	3.2	[1]1610	8.30	25.0	760	4.2	14.2	172	11	550
AUG 09...	1330	2.8	1130	8.20	24.0	760	1.6	18.3	219	31	320

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER WH IT FIELD MG/L AS HCO3	CAR-BONATE WATER WH IT FIELD MG/L AS CO3	ALKA-LINITY WAT WH TOT IT FIELD MG/L AS CACO3	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3
APR 21...	0	28	10	27	34	1	1.7	134	0	110	112
MAY 09...	0	85	36	97	37	2	2.7	454	0	372	362
JUN 08...	0	59	26	74	38	2	2.4	315	0	258	256
JUL 07...	97	120	61	160	39	3	2.0	--	--	--	[1]454
AUG 09...	0	59	42	120	45	3	2.5	--	--	--	[1]344

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)
APR 21...	38	17	9.0	201	202	0.27	0.83	0.08	0.8	0.5	0.22
MAY 09...	110	75	19	652	645	0.89	0.52	<0.01	0.3	0.3	0.17
JUN 08...	81	51	18	477	469	0.65	0.84	0.05	0.9	0.6	0.23
JUL 07...	240	140	60	1020	1060	1.39	0.52	0.12	0.6	0.7	0.17
AUG 09...	110	110	12	670	664	0.91	0.53	<0.01	0.7	0.7	0.11

See footnotes at end of table.

11183600 WALNUT CREEK AT CONCORD, CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)
APR 21...	0.18	0.16	0.14	3700	40	4	3	7	1	9	3
MAY 09...	0.04	0.14	0.14	60	<10	4	--	1	--	10	1
JUN 08...	0.21	0.16	0.16	180	<10	4	3	2	<1	7	3
JUL 07...	0.13	0.12	0.11	260	<10	3	3	2	<1	5	2
AUG 09...	0.09	0.06	0.06	50	10	5	4	<1	<1	2	1

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
APR 21...	4200	67	6	<5	140	30	<0.1	<0.1	13	2	40
MAY 09...	60	11	<5	<5	70	65	0.1	--	9	7	10
JUN 08...	230	14	<5	<5	230	200	<0.1	<0.10	7	4	<10
JUL 07...	440	--	<5	<5	490	--	<0.1	<0.10	5	4	30
AUG 09...	290	10	<5	<5	120	97	<0.1	<0.10	2	3	<10

DATE	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON ORGANIC TOTAL (MG/L AS C)	CYANIDE DIS-SOLVED (MG/L AS CN)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI-METRIC (MG/L)	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)
APR 21...	8	--	<0.01	<0.01	2	1	<0.10	<0.01	<0.1	<0.01	<0.01
MAY 09...	4	5.1	<0.01	0.02	2	<1	<0.10	<0.01	<0.1	<0.01	<0.01
JUN 08...	5	7.3	<0.01	<0.01	3	<1	<0.10	<0.01	<0.10	<0.01	<0.01
JUL 07...	<3	4.2	--	--	2	<1	<0.10	<0.01	<0.10	<0.01	<0.01
AUG 09...	<3	6.0	<0.01	<0.01	1	<1	<0.10	<0.01	<0.10	<0.01	<0.01

DATE	DDT, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)
APR 21...	<0.01	0.35	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.10
MAY 09...	<0.01	0.11	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01
JUN 08...	<0.01	0.11	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.12
JUL 07...	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
AUG 09...	<0.01	0.07	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

See footnote at end of table.

PACHECO CREEK BASIN

11183600 WALNUT CREEK AT CONCORD, CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	METH-OXY-CHLOR, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
APR										
21...	<0.01	<0.01	<0.01	<0.01	<1	<0.01	0.36	<0.01	<0.5	<0.01
MAY										
09...	<0.01	<0.01	<0.01	<0.01	<1	<0.01	0.03	<0.01	<0.5	<0.01
JUN										
08...	<0.01	<0.01	<0.01	<0.01	<1	<0.01	1.0	<0.01	<0.5	<0.01
JUL										
07...	<0.01	<0.01	<0.01	<0.01	<1	<0.01	0.03	<0.01	<0.5	<0.01
AUG										
09...	<0.01	<0.01	<0.01	<0.01	<1	<0.01	<0.20	<0.20	<0.5	<0.20

< Actual value is known to be less than the value shown.

[1] Laboratory value.

11183700 LITTLE PINE CREEK NEAR ALAMO, CA

LOCATION.--Lat 37°53'06", long 121°58'36", in Arroyo de las Nueces y Bolbones Grant, Contra Costa County, Hydrologic Unit 18050001, on right bank 200 ft downstream from road ford, 1.2 mi upstream from mouth, and 3.8 mi northeast of Alamo.

DRAINAGE AREA.--1.22 mi^2.

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 520 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--14 years, 0.33 ft^3/s, 239 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 138 ft^3/s, Jan. 4, 1982, gage height, 2.41 ft, from rating curve extended above 12 ft^3/s on basis of critical depth computation; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 30 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 17	1500	*8.5	*1.41				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.05	.09	.08	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.06	.08	.05	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.19	.07	.04	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.41	.07	.06	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.26	.06	.11	.00	.00	.00	.00	.00	.00
6	.00	.00	.17	.14	.06	.10	.00	.00	.00	.00	.00	.00
7	.00	.00	.0	.11	.06	.10	.00	.00	.00	.00	.00	.00
8	.00	.00	.16	.11	.06	.08	.00	.00	.00	.00	.00	.00
9	.00	.00	.03	.09	.06	.07	.00	.00	.00	.00	.00	.00
10	.00	.00	.0	.09	.06	.08	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.10	.06	.08	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.08	.06	.07	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.07	.06	.07	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.07	.05	.07	.00	.00	.00	.00	.00	.00
15	.00	.00	.03	.12	.05	.07	.00	.00	.00	.00	.00	.00
16	.00	.00	.27	.40	.04	.06	.00	.00	.00	.00	.00	.00
17	.00	.00	.11	4.1	.04	.05	.00	.00	.00	.00	.00	.00
18	.00	.00	.05	1.3	.04	.05	.00	.00	.00	.00	.00	.00
19	.00	.00	.04	.63	.04	.05	.00	.00	.00	.00	.00	.00
20	.00	.00	.03	.40	.04	.04	.00	.00	.00	.00	.00	.00
21	.00	.00	.04	.30	.04	.03	.00	.00	.00	.00	.00	.00
22	.00	.00	.04	.23	.05	.02	.00	.00	.00	.00	.00	.00
23	.00	.00	.04	.19	.04	.02	.00	.00	.00	.00	.00	.00
24	.00	.00	.03	.16	.04	.01	.00	.00	.00	.00	.00	.00
25	.00	.00	.03	.15	.04	.01	.00	.00	.00	.00	.00	.00
26	.00	.00	.03	.13	.04	.01	.00	.00	.00	.00	.00	.00
27	.00	.00	.04	.12	.04	.0	.00	.00	.00	.00	.00	.00
28	.0	.00	.23	.11	.08	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.16	.15	.12	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.07	.11	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.06	.10	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	1.66	10.53	1.64	1.48	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.00	.00	.054	.34	.057	.048	.00	.00	.00	.00	.00	.00
MAX	.00	.00	.27	4.1	.12	.11	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.05	.04	.00	.00	.00	.00	.00	.00	.00
AC-FT	.0	.0	3.3	21	3.3	2.9	.0	.0	.0	.0	.0	.0

CAL YR 1987 TOTAL 12.14 MEAN .033 MAX 3.4 MIN .00 AC-FT 24
WTR YR 1988 TOTAL 15.31 MEAN .042 MAX 4.1 MIN .00 AC-FT 30

11456000 NAPA RIVER NEAR ST. HELENA, CA

LOCATION.--Lat 38°29'52", long 122°25'37", in Carne Humana Grant, Napa County, Hydrologic Unit 18050002, on right bank 0.2 mi upstream from highway bridge, 1.3 mi northeast of Zinfandel, and 2.5 mi east of St. Helena.

DRAINAGE AREA.--81.4 mi^2.

PERIOD OF RECORD.--October 1929 to September 1932, October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.--WSP 1929: Drainage area. WDR CA-78-2: 1977(M).

GAGE.--Water-stage recorder. Elevation of gage is 170.12 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 22, 1958, at datum 3.00 ft higher. Nov. 22, 1958, to July 22, 1976, at datum 2.00 ft higher.

REMARKS.--No estimated daily discharges. Records good above 10 ft^3/s and fair below. Some regulation by Bell Canyon Reservoir, capacity, 2,530 acre-ft, since 1959. Small diversions above station for irrigation of about 1,500 acres.

AVERAGE DISCHARGE.--52 years, 97.8 ft^3/s, 70,860 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900 ft^3/s, Feb. 17, 1986, gage height, 18.52 ft, from rating curve extended above 11,000 ft^3/s on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 4	1345	*1,390	*7.43				

Minimum daily, 0.21 ft^3/s, Oct. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.26	1.7	44	57	77	26	8.9	8.9	5.7	2.1	.62	.48
2	.27	1.3	150	54	70	25	9.2	8.6	5.9	1.9	.63	.46
3	.28	1.2	85	372	63	22	9.4	9.2	6.1	1.3	.61	.44
4	.31	1.2	40	1170	59	20	10	8.8	6.1	1.3	.60	.44
5	.32	1.2	47	557	58	20	11	9.0	6.1	1.4	.60	.42
6	.26	1.2	391	303	54	20	11	11	6.5	1.8	.60	.40
7	.22	1.2	189	214	50	20	8.3	15	11	1.9	.60	.41
8	.22	1.2	476	182	47	19	9.0	18	10	1.3	.56	.43
9	.21	1.6	586	157	45	19	9.8	13	8.8	1.3	.52	.44
10	.22	1.5	674	194	42	19	9.8	12	8.0	1.4	.49	.44
11	.23	1.4	315	378	39	17	9.8	11	7.6	1.2	.53	.43
12	.23	1.4	143	236	37	15	9.8	10	7.4	1.1	.53	.39
13	.23	4.1	85	174	36	13	9.8	10	6.5	1.0	.53	.36
14	.26	4.2	64	140	35	12	10	9.6	5.9	.88	.54	.37
15	.29	2.7	52	286	35	10	9.4	8.8	4.2	.83	.57	.38
16	.64	2.0	155	602	33	9.7	8.1	9.0	3.5	.81	.59	.38
17	.66	8.8	274	681	30	9.8	8.6	11	3.4	.83	.57	.39
18	.66	10	134	441	29	9.8	8.6	9.4	3.2	.86	.57	.37
19	.69	5.6	90	292	28	9.5	28	7.9	3.0	.89	.57	.35
20	.69	8.5	67	216	28	11	26	8.1	2.9	.85	.57	.34
21	.71	13	57	173	28	11	19	7.5	2.7	.83	.55	.31
22	.75	7.5	54	136	27	11	16	7.2	2.4	.83	.54	.31
23	.85	5.0	45	114	27	11	19	7.2	3.0	.76	.50	.31
24	1.1	4.0	40	99	26	11	15	7.2	3.1	.72	.44	.32
25	1.3	3.5	38	86	25	10	13	7.2	2.7	.71	.44	.33
26	1.3	3.2	36	79	25	11	13	6.1	2.3	.69	.42	.34
27	1.3	3.2	35	74	25	10	12	6.1	2.0	.65	.43	.34
28	2.3	3.2	69	69	31	10	11	6.1	1.9	.59	.46	.33
29	3.8	3.2	129	106	27	9.2	11	6.5	2.0	.58	.47	.32
30	2.5	20	79	121	---	8.2	11	6.7	2.0	.59	.48	.31
31	1.9	---	61	88	---	8.1	---	6.7	---	.59	.49	---
TOTAL	24.96	127.8	4704	7851	1136	437.3	364.5	282.8	145.9	32.49	16.62	11.34
MEAN	.81	4.26	152	253	39.2	14.1	12.1	9.12	4.86	1.05	.54	.38
MAX	3.8	20	674	1170	77	26	28	18	11	2.1	.63	.48
MIN	.21	1.2	35	54	25	8.1	8.1	6.1	1.9	.58	.42	.31
AC-FT	50	253	9330	15570	2250	867	723	561	289	64	33	22

CAL YR 1987 TOTAL 13900.08 MEAN 38.1 MAX 1300 MIN .03 AC-FT 27570
WTR YR 1988 TOTAL 15134.71 MEAN 41.4 MAX 1170 MIN .21 AC-FT 30020

NAPA RIVER BASIN

11458000 NAPA RIVER NEAR NAPA, CA
(National stream-quality accounting network station)

LOCATION.--Lat 38°22'06", long 122°18'08", in Yajome Grant, Napa County, Hydrologic Unit 18050002, on left bank at downstream side of Oak Knoll Avenue bridge, 0.4 mi downstream from Dry Creek, 5 mi north of Napa, and 12.8 mi downstream from Conn Dam.

DRAINAGE AREA.--218 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1929 to September 1932, October 1959 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.--WSP 1315-B: 1930(M). WDR CA-87-2: 1963(M), 1965(M), 1967(M), 1982-85.

GAGE.--Water-stage recorder. Datum of gage is 24.74 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1 to Nov. 13 and March 14-16. Records good except those for periods of estimated daily record, which are poor. Flow regulated by Lake Hennessey beginning in December 1945, located 12.8 mi upstream (capacity 31,000 acre-ft); Rector Reservoir beginning in 1948, located 12.4 mi upstream (capacity 4,400 acre-ft); Bell Canyon Reservoir beginning in 1959, located 19.6 mi upstream (capacity 2,530 acre-ft). Diversions for irrigation above the station of about 10,000 acres.

AVERAGE DISCHARGE.--32 years, 208 ft^3/s, 150,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,100 ft^3/s, Feb. 18, 1986, gage height, 30.20 ft, from floodmarks; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,290 ft^3/s, Jan. 4, gage height, 11.03 ft; minimum daily, 0.59 ft^3/s, Aug. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.64	2.1	51	111	157	49	20	21	11	1.0	.86	1.8
2	.62	2.2	136	99	140	49	18	20	9.5	2.2	.59	1.9
3	.73	2.4	187	332	125	45	18	20	7.8	3.3	1.1	1.6
4	.86	2.1	76	1850	113	41	20	20	7.6	3.5	1.3	1.2
5	1.1	1.8	75	1160	112	41	19	19	8.1	3.6	1.4	.99
6	1.0	1.6	503	598	106	41	15	19	9.2	2.9	1.6	1.1
7	.98	1.4	421	436	100	41	15	23	12	2.0	1.9	1.6
8	1.1	1.3	695	373	95	38	14	28	16	2.2	1.9	1.8
9	.95	1.1	679	291	90	39	15	28	15	3.6	1.6	2.0
10	.90	.98	950	306	85	39	16	24	12	3.7	1.7	1.9
11	.98	.86	533	554	81	39	16	21	11	3.6	1.7	1.6
12	.87	.76	253	413	77	36	15	19	10	3.2	1.8	1.3
13	1.0	4.7	156	306	74	34	16	18	9.7	3.2	1.7	1.4
14	1.3	3.7	115	254	71	27	17	18	9.8	3.4	2.3	1.1
15	1.3	3.4	93	459	69	24	18	18	9.0	3.4	2.1	1.2
16	1.3	3.5	135	1110	66	21	18	17	9.0	3.2	2.1	1.3
17	1.3	6.9	444	1220	61	18	16	18	8.5	3.0	1.9	1.3
18	1.5	9.6	228	865	58	16	16	19	7.3	3.1	2.0	1.3
19	1.4	14	153	575	56	21	28	17	6.3	2.8	2.1	1.2
20	1.2	10	118	444	56	23	72	15	5.7	2.2	1.9	1.1
21	1.5	16	96	360	54	24	44	15	5.2	2.2	2.0	.74
22	1.9	18	90	283	54	23	35	14	9.2	1.9	2.3	1.0
23	2.0	7.9	78	238	54	22	34	14	5.1	1.9	2.1	1.2
24	1.8	5.2	66	205	53	22	33	14	4.1	1.7	2.0	1.1
25	1.8	4.2	61	180	51	21	28	14	3.3	2.6	1.9	1.1
26	1.6	4.0	57	161	50	21	27	14	2.3	2.1	1.6	1.1
27	1.7	4.0	53	148	50	19	26	13	2.4	2.2	1.7	.87
28	2.4	4.1	103	138	57	20	25	14	2.0	2.0	1.8	.75
29	2.2	4.4	277	205	52	17	24	14	1.7	1.8	2.0	.65
30	2.1	9.1	178	255	---	17	24	13	1.3	1.6	1.8	.76
31	2.1	---	128	183	---	19	---	12	---	1.1	1.8	---
TOTAL	42.13	151.30	7188	14112	2267	907	702	553	231.1	80.2	54.55	38.16
MEAN	1.36	5.04	232	455	78.2	29.3	23.4	17.8	7.70	2.59	1.76	1.27
MAX	2.4	18	950	1850	157	49	72	28	16	3.7	2.3	2.0
MIN	.62	.76	51	99	50	16	14	12	1.3	1.0	.59	.65
AC-FT	84	300	14260	27990	4500	1800	1390	1100	458	159	108	76

CAL YR 1987 TOTAL 22002.90 MEAN 60.3 MAX 2740 MIN .52 AC-FT 43640
WTR YR 1988 TOTAL 26326.44 MEAN 71.9 MAX 1850 MIN .59 AC-FT 52220

11458000 NAPA RIVER NEAR NAPA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1971, 1973 to current year.
CHEMICAL DATA: Water years 1973 to current year.
BIOLOGICAL DATA: Water years 1978-81.
SPECIFIC CONDUCTANCE: Water years 1978 to current year.
WATER TEMPERATURE: Water years 1977-81.
SEDIMENT DATA: Water years 1971, 1977 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1978 to September 1981.
WATER TEMPERATURE: October 1976 to September 1981.
SUSPENDED-SEDIMENT DISCHARGE: October 1976 to September 1978.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (FTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
NOV 18...	1055	5.1	418	8.00	13.5	0.90	770	10.0	95	K250	K270	190
JAN 21...	1135	359	214	7.70	9.0	6.3	775	10.9	93	67	200	81
MAR 09...	1010	37	366	8.00	13.5	0.80	780	10.2	96	K16	K13	140
MAY 17...	1030	19	380	8.10	16.0	1.8	765	8.7	88	39	650	160
JUL 08...	1015	1.7	408	8.20	20.0	0.30	765	6.8	75	K19	98	160
SEP 07...	1015	1.7	463	8.20	18.5	0.40	760	7.2	77	24	290	210

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER WH IT FIELD MG/L AS HCO3	ALKA-LINITY WAT WH TOT IT FIELD MG/L AS CACO3	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
NOV 18...	19	29	28	22	20	0.7	1.6	206	169	169	34	21
JAN 21...	8	16	10	12	24	0.6	2.0	89	73	73	21	9.2
MAR 09...	3	23	19	19	23	0.7	2.3	163	133	133	29	15
MAY 17...	17	26	23	24	24	0.8	1.9	174	143	143	31	21
JUL 08...	0	26	24	23	23	0.8	2.0	210	172	170	28	18
SEP 07...	13	31	31	24	20	0.7	2.2	235	193	192	28	18

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)
NOV 18...	0.20	32	264	270	0.36	<0.010	0.110	0.010	<0.010	0.20	0.060
JAN 21...	0.20	34	151	155	0.21	0.010	1.50	0.110	0.100	0.40	0.150
MAR 09...	0.20	33	212	226	0.29	0.010	1.30	0.080	0.030	1.0	0.120
MAY 17...	0.30	35	249	250	0.34	<0.010	0.340	0.021	0.021	<0.20	0.070
JUL 08...	0.20	36	257	259	0.35	<0.010	<0.100	<0.010	<0.010	0.40	0.050
SEP 07...	0.20	35	276	285	0.38	<0.010	<0.100	<0.010	0.010	<0.20	0.060

See footnotes at end of table.

11458000 NAPA RIVER NEAR NAPA, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
NOV 18...	0.060	0.050	<10	2	70	<0.5	<1	<1	<3	2	23
JAN 21...	0.110	0.070	10	1	38	<0.5	2	1	<3	2	17
MAR 09...	0.100	0.090	--	--	--	--	--	--	--	--	--
MAY 17...	0.070	0.030	<10	2	66	<0.5	<1	<1	<3	<1	17
JUL 08...	0.021	0.021	--	--	--	--	--	--	--	--	--
SEP 07...	0.060	0.060	<10	3	80	<0.5	<1	1	<3	1	48

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV 18...	<5	24	15	<0.1	<10	<1	<1	<1.0	200	<6	<3
JAN 21...	<5	11	7	<0.1	<10	1	<1	<1.0	110	<6	8
MAR 09...	--	--	--	--	--	--	--	--	--	--	--
MAY 17...	<5	47	14	<0.1	<10	3	<1	<1.0	180	<6	<3
JUL 08...	--	--	--	--	--	--	--	--	--	--	--
SEP 07...	<5	35	17	<0.1	<10	<1	<1	<1.0	220	<6	<3

K Results based on colony count outside the acceptable range (non-ideal colony count).
< Actual value is known to be less than value shown.

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	SAMPLE LOC-ATION, CROSS SECTION (FT FM L BANK)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	SEDI-MENT, SUS-PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR 09... *	0940	5.10	365	8.00	13.5	780	10.2	96	4	76
09... *	0945	8.80	367	8.00	13.5	780	10.3	97	4	81
09... *	0950	11.5	366	8.00	13.5	780	10.3	97	4	76
09... *	0955	13.5	366	8.00	13.5	780	10.2	96	4	78
09... *	1000	16.8	368	8.00	13.5	780	10.2	96	3	92
SEP 01... *	1535	3.40	445	8.30	22.5	760	9.4	109	0	--
01... *	1540	5.50	447	8.30	22.5	760	9.5	110	0	--
01... *	1545	6.70	449	8.30	22.5	760	9.5	110	1	--
01... *	1550	7.70	449	8.30	22.5	760	9.5	110	0	--
01... *	1555	8.80	450	8.30	22.5	760	9.5	110	0	--

* Instantaneous streamflow at the time of cross-sectional measurment: Mar. 9, 37 ft^3/s; Sept. 1, 2.0 ft^3/s.

11458000 NAPA RIVER NEAR NAPA, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV						
18...	1110	5.1	13.5	3	0.04	88
JAN						
21...	1120	360	9.0	8	7.8	98
MAR						
09...	1005	37	13.5	4	0.40	80
MAY						
17...	1025	19	16.0	6	0.31	95
JUL						
08...	1005	1.7	20.0	3	0.01	62
SEP						
01...	1530	2.0	22.5	0	0.0	--
07...	0950	1.7	18.5	3	0.01	64

11459500 NOVATO CREEK AT NOVATO, CA

LOCATION.--Lat 38°06'28", long 122°34'44", in Novato Grant, Marin County, Hydrologic Unit 18050002, on left bank in Novato, 100 ft upstream from 7th Street Bridge, and 3.9 downstream from Novato Creek Dam.

DRAINAGE AREA.--17.6 mi^2.

PERIOD OF RECORD.--October 1946 to current year. Records of diversions for water years 1952-53, estimated. Prior to October 1966, published as "near Novato."

GAGE.--Water-stage recorder. Datum of gage is 14.76 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 23, 1967, at site 0.6 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Flow regulated by Stafford Lake beginning Dec. 1, 1951. Capacity, 4,500 acre-ft since Oct. 18, 1954; contents 1,300 acre-ft, Sept. 30, 1988. Diversion from Stafford Lake for municipal water supply began Apr. 25, 1952, and amounted to 1,508 acre-ft for the current year. No diversion from Russian River into Stafford Lake during current year.

COOPERATION.--Record of diversions and storage were provided by North Marin Water District.

AVERAGE DISCHARGE (adjusted for diversions).--42 years, 14.6 ft^3/s, 10,580 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,000 ft^3/s, Jan. 4, 1932, gage height, 14.52 ft; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 310 ft^3/s, Dec. 8, gage height, 5.77 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.63	.34	9.7	6.0	4.6	1.4	.90	.51	.35	.02	.00	.00
2	.26	.92	6.3	9.0	4.1	1.3	.93	.51	.39	.00	.00	.00
3	.15	.33	2.1	64	3.7	1.3	1.0	.55	.32	.0	.91	.00
4	.00	.19	17	118	3.4	1.2	1.0	.51	.32	.02	.86	.00
5	.00	.20	5.5	41	3.2	1.2	.92	.83	.29	.03	.79	.00
6	.00	.15	46	21	3.0	1.2	.90	.93	.37	.0	.97	.0
7	.00	.13	6.3	15	2.9	1.1	.91	2.0	1.0	.00	1.1	.01
8	.00	.15	43	12	2.7	1.1	.94	.85	.45	.00	.80	.03
9	.00	.94	7.5	11	2.5	1.0	.92	.77	.34	.01	.85	.03
10	.09	.27	5.6	11	2.3	1.0	.88	1.2	.30	.00	.52	.07
11	.04	.10	3.5	12	2.2	.99	.82	1.9	.24	.00	.30	.06
12	.08	.07	2.8	8.5	2.1	.99	.80	1.7	.21	.00	.41	.01
13	.10	7.1	2.4	7.3	2.0	1.0	.81	.86	.18	.00	.53	.00
14	.09	.46	2.1	8.5	1.9	1.1	.88	.16	.17	.15	.41	.00
15	.12	.16	11	18	1.8	1.1	.86	.16	.15	.17	.40	.03
16	.10	.11	32	41	1.8	.98	.85	1.8	.16	.02	.34	.06
17	.09	13	17	103	1.6	.98	.84	.78	.18	.00	.22	.07
18	.00	1.1	7.1	31	1.6	.98	.87	.56	.17	.00	.09	.03
19	.00	.47	5.1	20	1.5	.98	8.9	.48	.11	.00	.09	.00
20	.00	11	3.9	14	1.4	.98	1.9	.68	.10	.00	.19	.00
21	.10	1.2	3.9	12	1.5	.96	1.0	.43	.10	.00	.21	.00
22	.77	.52	4.2	10	1.4	.92	1.0	.36	.09	.00	.30	.00
23	.67	.38	2.9	8.6	1.4	.93	.90	.39	.08	.00	.22	.00
24	.33	.27	2.5	7.4	1.4	.90	.69	.41	.10	.00	.06	.03
25	.12	.23	2.3	6.4	1.3	.89	.63	.46	.08	.00	.0	.03
26	.09	.26	2.1	5.8	1.3	.89	.63	.43	.02	.00	.00	.09
27	8.5	.28	7.5	5.3	1.4	.88	.65	.39	.01	.00	.00	.10
28	22	.34	55	5.7	5.7	.88	.58	.50	.27	.00	.00	.10
29	2.3	.33	32	13	1.6	.90	1.5	.45	.18	.00	.00	.04
30	.69	27	11	6.2	---	.88	.57	.33	.07	.0	.00	.0
31	.48	---	7.7	5.1	---	.92	---	.31	---	.00	.00	---
TOTAL	37.80	68.00	367.0	656.8	67.3	31.83	34.98	22.20	6.80	0.42	10.57	0.79
MEAN	1.22	2.27	11.8	21.2	2.32	1.03	1.17	.72	.23	.014	.34	.026
MAX	22	27	55	118	5.7	1.4	8.9	2.0	1.0	.17	1.1	.10
MIN	.00	.07	2.1	5.1	1.3	.88	.57	.16	.01	.00	.00	.00
AC-FT	75	135	728	1300	133	63	69	44	13	.8	21	1.6

CAL YR 1987 TOTAL 1320.68 MEAN 3.62 MAX 149 MIN .00 AC-FT 2620
WTR YR 1988 TOTAL 1304.49 MEAN 3.56 MAX 118 MIN .00 AC-FT 2590

11460000 CORTE MADERA CREEK AT ROSS, CA

LOCATION.--Lat 37°57'45", long 122°33'20", in Punta de Quentin Grant, Marin County, Hydrologic Unit 18050002, on left bank behind fire station at Ross, 1.7 mi southwest of San Rafael, 1.7 mi below Phoenix Lake, and 4 mi upstream from mouth.

DRAINAGE AREA.--18.1 mi^2.

PERIOD OF RECORD.--February 1951 to current year.

REVISED RECORD.--WDR CA-85-2: 1982(M).

GAGE.--Water-stage recorder. Datum of gage is 7.97 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--No estimated daily discharges. Records good except those for flows below 1.0 ft^3/s, which are fair. Flow slightly regulated by Phoenix Lake, capacity 612 acre-ft. Diversion on tributary above station by Marin Municipal Water District.

AVERAGE DISCHARGE.--37 years, 28.8 ft^3/s, 20,870 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,200 ft^3/s, Jan. 4, 1982, gage height, 19.81 ft; no flow at times.

EXTREMES FOR CURRENT YEAR..--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 8	0700	*975	*10.35				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.19	17	17	14	3.6	1.5	1.7	.54	.10	.00	.00
2	.08	.23	52	18	12	3.1	1.5	1.8	.50	.10	.00	.00
3	.07	.26	15	158	11	3.1	1.6	1.8	.49	.09	.00	.00
4	.06	.30	27	519	9.8	2.9	1.6	1.8	.48	.09	.00	.00
5	.01	.31	18	185	8.8	2.8	1.5	1.9	.47	.10	.00	.00
6	.0	.30	92	75	8.5	3.0	1.5	2.2	.93	.10	.00	.00
7	.0	.28	20	55	8.0	2.9	1.5	4.1	1.1	.09	.00	.00
8	.07	.27	246	45	7.5	2.6	1.5	2.1	.55	.09	.00	.00
9	.09	.86	274	34	7.4	2.4	1.4	1.7	.49	.09	.00	.00
10	.16	.33	99	35	6.9	2.5	1.4	1.6	.49	.08	.00	.00
11	.19	.30	37	48	6.6	2.5	1.4	1.4	.43	.08	.00	.00
12	.24	.33	18	34	6.4	2.2	1.3	1.3	.42	.09	.00	.00
13	.16	5.8	9.7	27	6.0	2.2	1.4	1.3	.39	.09	.00	.00
14	.17	.68	6.2	25	5.7	2.1	1.4	1.2	.37	.09	.00	.00
15	.18	.39	14	54	5.6	2.1	1.3	1.2	.35	.08	.00	.00
16	.18	.42	73	187	5.2	2.0	1.4	1.7	.35	.06	.00	.00
17	.19	13	86	308	4.9	2.0	1.4	1.3	.37	.05	.00	.00
18	.20	1.1	33	115	4.9	2.0	1.4	1.0	.31	.04	.00	.00
19	.18	.66	19	61	4.9	2.0	49	.92	.25	.04	.00	.00
20	.22	12	11	42	4.6	2.0	11	.86	.26	.14	.00	.00
21	.22	1.4	7.2	32	4.7	1.9	4.6	.73	.28	.07	.00	.00
22	.44	.87	6.6	25	4.8	1.9	4.0	.76	.28	.05	.00	.00
23	.81	.82	4.7	20	4.7	1.8	3.6	.77	.23	.04	.00	.00
24	.37	.82	3.6	17	4.6	1.8	2.5	.70	.23	.03	.00	.00
25	.09	.87	2.8	14	4.5	1.9	2.1	.67	.21	.02	.00	.00
26	.06	.99	2.2	13	4.5	1.8	2.1	.65	.52	.01	.00	.00
27	6.0	1.0	25	12	4.9	1.8	1.9	.66	.17	.01	.00	.00
28	7.5	1.1	129	11	12	1.8	1.7	.67	.11	.01	.00	.00
29	.53	1.2	89	27	3.9	1.7	1.8	.66	.11	.00	.00	.00
30	.21	41	41	18	---	1.7	1.6	.57	.11	.00	.00	.00
31	.18	---	25	15	---	1.6	---	.61	---	.00	.00	---
TOTAL	18.96	88.08	1503.0	2246	197.3	69.7	111.9	40.33	11.79	1.93	0.00	0.00
MEAN	.61	2.94	48.5	72.5	6.80	2.25	3.73	1.30	.39	.062	.00	.00
MAX	7.5	41	274	519	14	3.6	49	4.1	1.1	.14	.00	.00
MIN	.00	.19	2.2	11	3.9	1.6	1.3	.57	.11	.00	.00	.00
AC-FT	38	175	2980	4450	391	138	222	80	23	3.8	.0	.0

CAL YR 1987 TOTAL 5029.33 MEAN 13.8 MAX 776 MIN .00 AC-FT 9980
WTR YR 1988 TOTAL 4288.99 MEAN 11.7 MAX 519 MIN .00 AC-FT 8510

11460400 LAGUNITAS CREEK AT SAMUEL P. TAYLOR STATE PARK, CA

LOCATION.--Lat 38°01'37", long 122°44'07", Marin County, Hydrologic Unit 18050005, in Samuel P. Taylor State Park, on left bank 300 ft upstream from Deadmans Gulch, 0.9 mi downstream from park entrance, 2.1 mi northwest of Lagunitas, and 3.4 mi downstream from Kent Lake.

DRAINAGE AREA.--34.3 mi^2.

PERIOD OF RECORD.--December 1982 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 102.89 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Kent Lake, capacity, 16,680 acre-ft, and Alpine Lake, capacity, 8,890 acre-ft, both of which divert for domestic and industrial use in Marin County.

AVERAGE DISCHARGE.--6 years, 41.9 ft^3/s, 30,360 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,470 ft^3/s, Feb. 18, 1986, gage height, 8.44 ft; minimum daily, 3.8 ft^3/s, Oct. 16-18, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 875 ft^3/s, Dec. 8, gage height, 5.59 ft; minimum daily, 4.4 ft^3/s, Aug. 31.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	5.8	37	26	17	15	12	12	8.0	7.0	5.5	5.0
2	4.9	5.8	76	23	16	15	12	12	8.0	7.0	5.4	5.0
3	4.9	5.8	34	109	16	15	12	12	8.0	7.0	5.4	5.1
4	4.9	5.8	33	477	16	15	12	12	8.0	6.9	5.4	5.0
5	4.9	5.8	38	180	16	15	12	12	8.0	6.8	5.4	5.0
6	4.9	5.8	132	84	16	15	12	13	8.4	6.9	5.5	5.0
7	5.0	5.9	49	59	16	15	12	14	9.4	6.7	5.4	5.0
8	5.3	6.1	215	50	15	15	12	13	8.9	6.5	6.1	5.0
9	5.3	6.7	227	39	15	14	12	13	8.8	6.5	5.4	5.2
10	5.5	6.7	121	38	15	14	12	13	8.8	6.5	5.2	5.2
11	5.8	6.5	58	61	15	14	12	13	8.7	6.5	5.5	5.2
12	5.8	6.4	36	46	15	14	12	13	8.6	6.5	5.6	5.1
13	5.8	9.3	25	37	15	14	12	13	8.6	6.3	5.5	5.0
14	5.8	7.4	20	31	14	14	12	13	8.6	6.6	5.4	5.0
15	5.9	6.5	20	60	14	13	12	12	8.6	7.5	5.4	4.9
16	6.0	6.3	56	103	15	13	12	11	8.6	7.5	5.3	4.8
17	5.8	12	73	206	16	13	12	9.6	8.4	7.5	5.2	5.0
18	5.6	8.4	40	103	16	13	12	9.4	7.5	7.5	5.2	5.0
19	5.6	5.9	29	63	16	13	19	9.3	7.2	7.7	5.2	5.0
20	5.6	9.3	23	45	16	13	16	9.0	7.2	7.5	5.5	5.1
21	5.6	9.1	20	35	16	13	13	8.8	7.2	7.3	5.5	5.0
22	5.6	7.2	18	28	16	13	13	8.8	7.2	6.5	5.4	5.1
23	5.7	6.8	18	24	16	13	14	8.8	7.1	6.3	5.4	5.2
24	5.8	6.4	20	21	15	13	13	8.8	7.0	6.3	5.3	5.2
25	5.8	6.1	19	19	15	13	13	8.7	7.0	6.2	5.4	5.3
26	5.7	6.1	18	18	15	13	13	8.6	6.9	6.3	5.4	5.1
27	5.9	6.1	19	16	15	13	13	8.6	6.8	6.4	5.4	5.0
28	8.4	6.1	90	15	17	13	13	8.7	6.8	5.5	5.4	5.0
29	6.6	6.0	98	24	16	12	13	8.9	6.8	5.3	6.3	5.0
30	6.0	40	47	21	---	12	12	8.4	7.0	5.2	6.9	5.0
31	5.8	---	33	18	---	12	---	8.0	---	5.2	4.4	---
TOTAL	175.1	238.1	1742	2079	451	422	381	333.4	236.1	205.4	169.3	151.5
MEAN	5.65	7.94	56.2	67.1	15.6	13.6	12.7	10.8	7.87	6.63	5.46	5.05
MAX	8.4	40	227	477	17	15	19	14	9.4	7.7	6.9	5.3
MIN	4.9	5.8	18	15	14	12	12	8.0	6.8	5.2	4.4	4.8
AC-FT	347	472	3460	4120	895	837	756	661	468	407	336	301

CAL YR 1987 TOTAL 7046.4 MEAN 19.3 MAX 617 MIN 4.7 AC-FT 13980
WTR YR 1988 TOTAL 6583.9 MEAN 18.0 MAX 477 MIN 4.4 AC-FT 13060

LAGUNITAS CREEK BASIN

11460600 LAGUNITAS CREEK NEAR POINT REYES STATION, CA

LOCATION.--Lat 38°04'49", long 122°47'00", in Nicasio (Black) Grant, Marin County, Hydrologic Unit 18050005, on right bank at upstream side of road bridge, 300 ft downstream from small right-bank tributary, 1.4 mi northeast of town of Point Reyes Station, and 2.5 mi downstream from Nicasio Dam.

DRAINAGE AREA.--81.7 mi^2.

PERIOD OF RECORD.--October 1974 to current year.

REVISED RECORDS.--WDR CA-79-2: 1975, 1978. WDR CA-82-2: 1975(m), 1978(m), 1980(m).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 50 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Nicasio Reservoir, capacity, 22,450 acre-ft; Kent Lake, capacity, 16,680 acre-ft; and Alpine Lake, capacity, 8,890 acre-ft, all of which divert water for domestic and industrial use in Marin County.

AVERAGE DISCHARGE.--14 years, 88.1 ft^3/s, 63,830 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,100 ft^3/s, Jan. 4, 1982, gage height, 26.96 ft, from rating curve extended above 6,200 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 0.01 ft^3/s, Sept. 26, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,210 ft^3/s, Jan. 4, gage height, 7.43 ft; minimum daily, 4.0 ft^3/s, Oct. 2, 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	4.7	49	42	31	18	13	12	8.1	6.9	5.4	4.6
2	4.0	4.5	101	35	28	18	13	12	8.1	7.0	5.2	5.0
3	4.0	4.6	54	184	27	17	13	12	8.1	6.9	5.2	5.1
4	4.1	4.9	39	805	25	17	13	12	8.1	6.9	5.3	5.2
5	4.1	5.0	57	367	23	17	13	12	8.1	6.9	5.2	5.1
6	4.1	4.7	213	177	23	16	13	12	8.3	6.9	5.3	5.1
7	4.2	4.7	103	121	23	16	13	16	9.7	7.2	5.2	5.1
8	4.3	4.7	345	105	22	16	13	14	8.7	6.8	5.4	5.1
9	4.3	5.4	376	84	21	16	13	13	8.3	6.6	5.7	5.3
10	4.3	5.3	241	76	20	15	13	13	8.3	6.7	5.3	5.4
11	4.4	5.2	119	138	20	15	13	13	8.3	6.7	5.4	5.4
12	4.5	5.2	72	98	20	15	13	12	8.3	6.7	5.8	5.2
13	4.5	8.5	48	80	19	15	13	13	8.1	6.6	5.7	5.3
14	4.4	8.3	34	66	18	15	13	12	8.1	6.1	5.4	5.2
15	4.2	6.2	30	130	18	15	13	12	8.1	7.5	5.4	5.4
16	4.2	5.6	83	182	18	15	13	12	8.2	7.6	5.2	5.3
17	4.1	11	141	373	20	15	13	9.9	8.3	7.6	5.3	5.2
18	4.1	11	80	213	20	15	13	9.1	7.8	7.5	5.1	5.0
19	4.1	7.3	57	136	19	15	24	8.9	7.4	7.6	5.1	5.2
20	4.1	9.0	42	98	19	14	23	8.7	7.2	7.7	5.1	5.3
21	4.2	12	33	77	19	14	15	8.5	7.0	7.7	5.3	5.2
22	4.2	8.0	31	62	19	14	15	8.3	7.0	6.8	5.4	5.3
23	4.3	7.2	27	51	18	14	16	8.4	7.0	6.3	5.2	5.3
24	4.5	6.8	29	44	18	14	14	8.5	6.9	6.3	5.2	5.2
25	4.4	6.5	26	38	18	14	14	8.5	6.9	6.3	5.2	4.9
26	4.4	6.5	24	33	18	14	14	8.3	7.0	6.3	5.1	5.4
27	4.5	6.5	24	29	18	14	13	8.3	7.0	6.2	5.3	5.2
28	8.3	6.5	125	27	22	13	13	8.4	8.4	5.8	5.3	5.2
29	6.5	6.5	195	45	19	13	14	8.8	6.8	5.2	5.3	5.1
30	5.2	38	87	43	---	13	13	8.3	6.9	5.1	7.3	5.1
31	4.7	---	56	35	---	13	---	8.1	---	5.2	5.1	---
TOTAL	139.3	230.3	2941	3994	603	465	422	331.0	234.5	207.6	166.4	155.4
MEAN	4.49	7.68	94.9	129	20.8	15.0	14.1	10.7	7.82	6.70	5.37	5.18
MAX	8.3	38	376	805	31	18	24	16	9.7	7.7	7.3	5.4
MIN	4.0	4.5	24	27	18	13	13	8.1	6.8	5.1	5.1	4.6
AC-FT	276	457	5830	7920	1200	922	837	657	465	412	330	308

CAL YR 1987 TOTAL 13687.8 MEAN 37.5 MAX 2000 MIN 4.0 AC-FT 27150
WTR YR 1988 TOTAL 9889.5 MEAN 27.0 MAX 805 MIN 4.0 AC-FT 19620

11460750 WALKER CREEK NEAR MARSHALL, CA

LOCATION.--Lat 38°10'33", long 122°49'02", in Soulajule (Vasquez) Grant, Marin County, Hydrologic Unit 18050005, on right bank 0.8 mi downstream from Verde Canyon, 2.8 mi below confluence of Arroyo Sausal and Salmon Creek, and 4.0 mi east of Marshall.

DRAINAGE AREA.--31.1 mi^2.

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 140 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Flow affected by regulation and diversions and by Soulajule Reservoir on Arroyo Sausal; reservoir capacity, 10,570 acre-ft.

AVERAGE DISCHARGE.--5 years, 29.4 ft^3/s, 21,300 acre-ft/yr.

EXTREMES FOR PERIOD.--Maximum discharge, 7,050 ft^3/s, Feb. 17, 1986, gage height, 10.79 ft, from rating curve extended above 1,100 ft^3/s on basis of comparison with discontinued downstream station (station 11460800); minimum daily, 4.4 ft^3/s, Oct. 5, 6, 1983.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of Jan. 4, 1982, reached a stage of 15.9 ft, present datum, from floodmarks, discharge, 14,600 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 690 ft^3/s, Jan. 16, gage height, 3.61 ft; minimum daily, 4.9 ft^3/s, many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	5.1	8.6	18	41	12	9.6	7.8	5.2	5.1	5.1	5.1
2	4.9	5.1	11	19	34	11	9.5	7.2	5.1	5.1	5.1	5.1
3	4.9	5.1	9.2	165	28	11	9.5	5.8	5.1	5.1	5.1	5.1
4	4.9	5.1	12	336	24	11	9.5	5.5	5.1	5.1	5.1	5.1
5	4.9	5.1	11	104	21	11	9.5	5.6	5.1	5.1	5.1	5.1
6	4.9	5.1	37	55	19	11	9.5	5.7	5.2	5.1	4.9	5.1
7	5.2	5.1	17	43	18	11	9.5	6.6	5.7	5.1	4.9	5.1
8	5.3	5.0	46	37	17	11	9.5	5.9	5.6	5.1	4.9	5.1
9	5.3	5.1	62	41	17	11	9.5	5.8	5.6	5.1	4.9	5.1
10	5.3	5.1	60	54	15	11	9.5	5.6	5.4	5.1	4.9	5.1
11	5.3	4.9	36	72	14	11	9.5	5.6	5.1	5.1	4.9	5.1
12	5.3	4.9	23	53	14	10	9.5	5.6	5.1	5.1	4.9	5.1
13	5.3	6.2	18	59	14	10	9.5	5.6	5.1	5.1	4.9	5.1
14	5.3	5.3	15	58	13	10	9.5	5.5	5.1	5.1	4.9	5.1
15	5.3	5.1	15	139	13	10	9.5	5.3	5.1	5.1	4.9	5.1
16	5.3	5.1	21	322	13	10	9.4	5.9	5.1	5.1	4.9	5.1
17	5.2	6.8	23	397	12	10	9.2	5.7	5.1	5.1	4.9	5.1
18	5.1	5.5	18	236	12	10	9.2	5.6	5.1	5.1	4.9	5.1
19	5.1	5.3	16	142	12	10	11	5.6	5.1	5.1	4.9	5.1
20	5.1	9.1	15	96	12	10	10	5.6	5.1	5.1	4.9	5.1
21	5.1	6.0	14	70	12	10	9.5	5.6	5.1	5.1	4.9	5.1
22	5.2	5.6	15	53	12	10	9.4	5.6	5.1	5.1	4.9	5.1
23	5.1	5.3	15	41	12	10	10	5.5	5.1	5.1	4.9	5.1
24	5.1	5.3	14	34	12	10	9.5	5.3	5.1	5.1	4.9	5.1
25	4.9	5.3	14	27	12	10	9.2	5.3	5.1	5.1	4.9	4.9
26	4.9	5.3	13	23	12	10	9.2	5.3	5.1	5.1	4.9	4.9
27	5.1	5.3	13	21	12	10	9.0	5.1	5.1	5.1	4.9	4.9
28	5.8	5.3	26	19	13	10	8.1	5.3	5.1	5.1	5.1	5.0
29	5.2	5.3	33	76	12	10	8.4	5.4	5.1	5.1	5.1	5.1
30	5.1	9.5	23	91	---	10	7.9	5.3	5.1	5.1	5.1	5.1
31	5.1	---	20	56	---	10	---	5.3	---	5.1	5.1	---
TOTAL	159.4	167.3	673.8	2957	472	322	281.6	176.5	155.1	158.1	153.7	152.3
MEAN	5.14	5.58	21.7	95.4	16.3	10.4	9.39	5.69	5.17	5.10	4.96	5.08
MAX	5.8	9.5	62	397	41	12	11	7.8	5.7	5.1	5.1	5.1
MIN	4.9	4.9	8.6	18	12	10	7.9	5.1	5.1	5.1	4.9	4.9
AC-FT	316	332	1340	5870	936	639	559	350	308	314	305	302

CAL YR 1987 TOTAL 4510.5 MEAN 12.4 MAX 374 MIN 4.7 AC-FT 8950
WTR YR 1988 TOTAL 5828.8 MEAN 15.9 MAX 397 MIN 4.9 AC-FT 11560

RUSSIAN RIVER BASIN

11461000 RUSSIAN RIVER NEAR UKIAH, CA

LOCATION.--Lat 39°11'44", long 123°11'38", in Yokaya Grant, Mendocino County, Hydrologic Unit 18010110, on right bank 20 ft downstream from bridge on Lake Mendocino Drive, 0.4 mi upstream from East Fork, 0.6 mi downstream from York Creek, and 3.2 mi north of Ukiah.

DRAINAGE AREA.--100 mi^2.

PERIOD OF RECORD.--August 1911 to September 1913, October 1952 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.--WSP 1929: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 599.22 ft above National Geodetic Vertical Datum of 1929. Prior to October 1952, nonrecording gage at bridge 20 ft upstream at different datum. Oct. 1, 1952, to Nov. 8, 1971, water-stage recorder at site 0.6 mi upstream at different datum.

REMARKS.--Estimated daily discharges: Oct. 1 to Nov. 30 and Mar. 28 to Sept. 30. Records good except for periods of estimated daily discharges, which are poor. No regulation. Diversions above station for irrigation of about 1,000 acres.

AVERAGE DISCHARGE.--38 years, 179 ft^3/s, 129,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,900 ft^3/s, Dec. 21, 1955, gage height, 19.0 ft, site and datum then in use; flood of Feb. 17, 1986, reached a stage of 19.00 ft, present site and datum; no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 4	0130	*6,040	*14.12				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.32	4.1	644	111	149	38	11	17	4.0	1.6	.10	.01
2	.19	3.5	1180	117	132	35	11	18	4.4	1.5	.12	.03
3	.21	3.3	333	1910	118	32	12	17	3.7	1.4	.11	.05
4	.22	2.8	342	2670	108	30	12	16	4.1	1.2	.10	.03
5	.21	2.6	145	686	99	30	9.1	13	5.0	1.3	.05	.00
6	.23	2.5	1520	380	91	28	10	17	5.3	1.2	.00	.00
7	.24	2.3	961	327	85	28	10	20	5.4	1.1	.00	.00
8	.24	3.8	1310	394	78	27	6.2	16	5.7	1.0	.00	.00
9	.26	3.2	1820	1220	73	25	7.3	15	5.4	.88	.00	.00
10	.30	3.3	2080	924	68	23	8.1	14	5.0	.78	.10	.00
11	.50	3.1	818	1230	64	22	8.9	13	4.4	.68	.22	.00
12	.74	5.1	461	634	60	19	9.1	11	4.0	.61	.50	.00
13	.76	8.7	305	437	57	18	9.2	9.4	3.7	.62	.80	.00
14	.79	7.2	234	442	54	20	10	8.9	3.3	.61	.60	.00
15	.85	6.0	193	1440	52	20	10	8.2	3.0	.55	.60	.00
16	.91	5.4	180	1170	48	19	8.1	9.0	2.9	.40	.60	.00
17	.99	15	122	700	46	18	7.0	11	2.8	.34	.60	.00
18	.99	12	72	464	44	17	6.5	9.7	2.8	.30	.60	.00
19	1.0	9.4	61	337	42	16	25	7.9	2.6	.20	.60	.00
20	1.1	27	52	258	41	14	27	6.8	2.5	.18	.30	.00
21	1.1	32	54	212	39	16	18	6.0	2.4	.16	.22	.00
22	1.7	12	69	178	38	14	17	5.2	2.3	.10	.17	.00
23	3.4	7.3	57	155	37	15	25	5.3	2.2	.00	.3[illegible]	.01
24	2.5	5.4	49	136	36	13	28	5.0	2.1	.00	.0[illegible]	.03
25	1.9	4.7	44	121	35	15	26	4.2	2.0	.00	.00	.05
26	1.7	4.4	40	108	34	13	25	3.6	1.9	.02	.00	.08
27	1.9	4.0	38	99	33	12	23	4.8	1.9	.05	.00	.08
28	6.1	3.5	143	100	38	8.4	21	5.0	1.8	.03	.00	.08
29	5.1	3.4	304	354	37	11	22	5.3	1.7	.00	.00	.14
30	4.4	78	176	277	---	12	20	3.8	1.6	.02	.00	.17
31	3.9	---	138	177	---	11	---	3.6	---	.10	.00	---
TOTAL	44.75	285.0	13945	17768	1836	619.4	442.5	309.7	99.9	16.93	6.78	0.76
MEAN	1.44	9.50	450	573	63.3	20.0	14.7	9.99	3.33	.55	.22	.025
MAX	6.1	78	2080	2670	149	38	28	20	5.7	1.6	.80	.17
MIN	.19	2.3	38	99	33	8.4	6.2	3.6	1.6	.00	.00	.00
AC-FT	89	565	27660	35240	3640	1230	878	614	198	34	13	1.5

CAL YR 1987 TOTAL 40767.59 MEAN 112 MAX 2130 MIN .00 AC-FT 80860
WTR YR 1988 TOTAL 35374.72 MEAN 96.7 MAX 2670 MIN .00 AC-FT 70170

RUSSIAN RIVER BASIN

11461500 EAST FORK RUSSIAN RIVER NEAR CALPELLA, CA

LOCATION.--Lat 39°14'48", long 123°07'45", in NW 1/4 NW 1/4 sec.18, T.16 N., R.11 W., Mendocino County, Hydrologic Unit 18010110, on left bank 0.1 mi downstream from Cold Creek and 3.9 mi east of Calpella.

DRAINAGE AREA.--92.2 mi^2.

PERIOD OF RECORD.--October 1941 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 787.87 ft above National Geodetic Vertical Datum of 1929. Prior to May 28, 1957, at site 1.3 mi downstream at different datum. May 28, 1957, to Apr. 5, 1966, at site 0.4 mi downstream at same datum.

REMARKS.--Estimated daily discharges: Apr. 6-20. Records good. Flow greatly affected by diversion from Eel River through Potter Valley powerplant (station 11471000). Diversion for irrigation of about 8,000 acres above station.

AVERAGE DISCHARGE.--47 years, 337 ft^3/s, 244,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,700 ft^3/s, Dec. 22, 1964, gage height, 20.21 ft, site then in use; maximum gage height, 20.82 ft, Feb. 17, 1986; minimum daily, 2.0 ft^3/s, July 13, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 8	0530	3,300	12.75	Jan. 3	2030	*6,680	*16.68

Minimum daily, 32 ft^3/s, Aug. 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	112	694	375	397	344	68	93	135	96	93	96
2	91	113	976	415	382	347	83	98	129	90	97	99
3	93	112	500	2750	374	340	82	108	131	65	98	104
4	92	111	638	2580	365	337	82	92	115	92	103	104
5	97	111	385	581	358	334	72	95	121	96	104	100
6	76	111	1420	514	351	332	85	105	118	87	98	89
7	79	113	823	531	351	331	62	119	116	90	97	99
8	83	112	1290	600	350	299	70	125	124	85	105	104
9	87	120	1610	1040	357	193	73	123	127	92	104	101
10	86	114	1210	905	357	179	77	122	122	96	98	101
11	84	112	459	970	357	175	76	112	121	97	92	108
12	95	112	459	622	364	175	80	111	122	88	108	109
13	98	137	399	528	360	172	89	108	118	93	94	109
14	95	116	369	580	356	172	91	108	111	93	101	103
15	97	111	362	1380	354	155	92	109	112	95	107	104
16	102	109	385	1330	356	58	91	128	114	100	106	103
17	95	180	369	754	353	61	89	137	112	95	96	75
18	98	142	354	580	356	64	125	141	111	95	97	73
19	95	118	314	509	354	68	167	139	107	88	95	73
20	103	158	349	471	351	63	145	131	105	88	98	72
21	187	152	356	442	348	73	139	122	104	87	102	70
22	196	130	366	420	348	80	140	104	105	87	109	61
23	202	125	349	405	345	83	151	109	104	80	68	63
24	185	121	344	396	335	65	123	112	95	91	32	65
25	186	116	344	378	333	81	128	115	98	92	63	81
26	114	119	341	379	337	80	121	117	95	92	96	84
27	111	122	325	376	334	82	116	121	99	99	89	79
28	123	117	462	379	342	66	111	124	97	101	87	70
29	119	116	563	648	339	71	111	128	96	96	95	71
30	112	236	433	493	---	69	101	124	95	91	95	73
31	114	---	394	413	---	73	---	129	---	93	89	---
TOTAL	3486	3778	17642	22744	10264	5022	3040	3609	3359	2850	2916	2643
MEAN	112	126	569	734	354	162	101	116	112	91.9	94.1	88.1
MAX	202	236	1610	2750	397	347	167	141	135	101	109	109
MIN	76	109	314	375	333	58	62	92	95	80	32	61
AC-FT	6910	7490	34990	45110	20360	9960	6030	7160	6660	5650	5780	5240

CAL YR 1987 TOTAL 74964 MEAN 205 MAX 2010 MIN 32 AC-FT 148700
WTR YR 1988 TOTAL 81353 MEAN 222 MAX 2750 MIN 32 AC-FT 161400

RUSSIAN RIVER BASIN

11461800 LAKE MENDOCINO NEAR UKIAH, CA

LOCATION.--Lat 39°11'53", long 123°10'50", in Yokaya Grant, Mendocino County, Hydrologic Unit 18010110, in intake tower 30 ft upstream from Coyote Dam on East Fork Russian River and 3.6 mi northeast of Ukiah.

DRAINAGE AREA.--105 mi^2.

PERIOD OF RECORD.--October 1965 to current year. Records prior to October 1965 in files of U.S. Army Corps of Engineers.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam; storage began in November 1958. Capacity based on 1953 survey, capacity table returned to use Oct. 1, 1983, 122,400 acre-ft between elevations 637.0 ft, invert of outlet tunnel, and 764.8 ft, spillway crest, NGVD. Storage affected by diversions from Eel River through Potter Valley powerplant (station 11471000). Water is released down East Fork Russian River for irrigation and recreation use. Records, including current year extremes, represent contents at 2400 hours.

COOPERATION.--Records were provided by U.S. Army Corps of Engineers; not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 114,800 acre-ft, Jan. 24, 1970, elevation, 760.86 ft; minimum, 12,070 acre-ft, Nov. 4, 1977, elevation, 687.15 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 80,136 acre-ft, Jan. 4, elevation, 741.96 ft; minimum, 35,589 acre-ft, Nov. 29, elevation, 713.52 ft.

Capacity table (elevation, in feet NGVD, and contents, in acre-feet)
(Provided by U.S. Army Corps of Engineers, from 1953 survey)

637	0	665	2,870	690	13,800	730	59,600
645	118	670	4,340	695	17,200	740	76,700
650	390	675	6,130	700	21,300	750	94,700
655	909	680	8,270	710	31,400	760	113,300
660	1,730	685	10,800	720	44,200	764.8	122,400

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41977	36787	37363	70471	72833	76906	76712	73077	69350	68663	61794	56242
2	41702	36698	39298	71354	72624	77277	76447	72937	69436	68457	61562	56051
3	41414	36634	40301	77083	72536	77667	76235	72833	69540	68217	61396	55875
4	41141	36520	41537	80136	72536	78021	76094	72710	69591	67961	61198	55716
5	40882	36431	42323	76765	72502	78376	75883	72606	69643	67807	61050	55542
6	40584	36343	45045	73829	72467	78677	75689	72589	69763	67635	60868	55335
7	40301	36254	46682	72641	72432	79104	75495	72519	69884	67448	60704	55161
8	40032	36216	49307	72798	72362	79406	75267	72432	70005	67243	60572	54987
9	39737	36141	52544	73864	72310	79442	75038	72345	70143	67056	60408	54813
10	39457	36053	54987	74617	72292	79459	74828	72241	70229	66834	60243	54623
11	39165	35977	55955	73566	72275	79477	74634	72171	70281	66647	60063	54466
12	38914	35914	56866	72223	72241	79531	74424	72084	70368	66443	59899	54308
13	38677	35977	57633	72206	72188	79531	74214	72014	70437	66172	59702	54198
14	38441	35902	58399	72536	72153	79556	74073	71910	70489	65934	59539	53994
15	38205	35864	59164	74073	72101	79556	73899	71806	70489	65731	59408	53822
16	37984	35789	59965	75038	72119	79370	73758	71754	70489	65528	59277	53665
17	37764	36002	60621	74354	72223	79175	73566	71684	70437	65325	59115	53462
18	37557	35977	61264	72868	72310	79015	73426	71597	70385	65122	58968	53259
19	37338	35914	61827	72014	72536	78855	73531	71528	70316	64920	58805	53087
20	37132	36027	62375	71841	72972	78642	73618	71407	70212	64634	58659	52854
21	37132	36040	62991	71858	73409	78500	73584	71250	70125	64398	58513	52637
22	37209	36002	63610	71979	73758	78340	73636	71025	70040	64130	58383	52420
23	37325	35939	64163	72066	74108	78251	73671	70817	69953	63827	58156	52203
24	37351	35902	64667	72119	74476	78074	73618	70627	69850	63559	57849	51987
25	37389	35827	65173	72101	74880	77933	73584	70419	69677	63325	57558	51817
26	37235	35776	65613	72206	75249	77773	73531	70229	69522	63108	57381	51648
27	37132	35739	66070	72362	75601	77596	73479	70057	69333	62875	57188	51464
28	37107	35664	66988	72502	76024	77419	73409	69901	69178	62674	56979	51280
29	37017	35589	68114	73042	76412	77224	73356	69729	69023	62441	56802	51081
30	36927	35990	68972	73095	---	77030	73199	69574	68834	62225	56642	50913
31	36863	---	69746	72990	---	76906	---	69402	---	62076	56434	---
MAX	41977	36787	69746	80136	76412	79556	76712	73077	70489	68663	61794	56242
MIN	36863	35589	37363	70471	72101	76906	73199	69402	68834	62076	56434	50913
a	714.53	713.84	736.04	737.91	739.86	740.14	738.03	735.84	735.51	731.51	728.05	724.52
b	-5391	-873	+33756	+3244	+3422	+494	-3707	-3797	-568	-6758	-5642	-5521

CAL YR 1987 MAX 90209 MIN 35589 b +21694
WTR YR 1938 MAX 80136 MIN 35589 b +8659

a Elevation, in feet NGVD, at end of month.
b Change in contents, in acre-feet.

11462000 EAST FORK RUSSIAN RIVER NEAR UKIAH, CA

LOCATION.--Lat 39°11'51", long 123°11'11", in Yokaya Grant, Mendocino County, Hydrologic Unit 18010110, on right bank of outlet channel, 500 ft downstream from Coyote Dam, 1,300 ft upstream from mouth, and 3.2 mi northeast of Ukiah.

DRAINAGE AREA.--105 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1911 to September 1913, October 1951 to June 1956, October 1957 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 614.41 ft above National Geodetic Vertical Datum of 1929. Prior to October 1951, nonrecording gage at site 0.5 mi upstream at different datum. October 1951 to June 1956, water-stage recorder at site 1.0 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow affected by diversion from Eel River through Potter Valley powerplant (station 11471000) and since November 1958 by storage in Lake Mendocino (station 11461800) 500 ft upstream. Diversions above station for irrigation of about 8,000 acres.

AVERAGE DISCHARGE (unadjusted).--7 years (water years 1912-13, 1952-55, 1958), 356 ft^3/s, 257,900 acre-ft/yr; 29 years (water years 1960-88), 350 ft^3/s, 253,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Prior to regulation by Lake Mendocino, maximum discharge, 13,300 ft^3/s, Dec. 21, 1955, gage height, 16.86 ft, site and datum then in use, from rating curve extended above 6,300 ft^3/s on basis of maximum flow at station upstream which was defined to 8,600 ft^3/s; no flow Aug. 13-15, 1913. Water year 1957 to current year: Maximum discharge, 7,350 ft^3/s, Jan. 24, 1970, gage height, 10.84 ft; minimum daily, 0.02 ft^3/s, Apr. 17, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,670 ft^3/s, Jan. 4, gage height, 5.27 ft; minimum daily, 26 ft^3/s, Dec. 29, 31.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	242	153	33	34	514	146	165	159	130	153	182	170
2	241	153	30	45	514	145	177	160	93	166	177	170
3	242	159	27	34	442	143	178	163	87	176	177	170
4	242	164	28	1220	405	144	177	161	85	177	170	170
5	242	166	28	2490	405	144	173	160	85	172	160	169
6	242	164	28	2170	405	146	173	160	77	159	160	173
7	242	163	28	1310	405	145	173	160	56	153	160	171
8	239	164	30	695	405	143	174	156	51	159	160	170
9	242	166	27	700	405	144	173	155	53	163	160	170
10	238	159	29	696	381	146	173	156	64	163	160	170
11	238	153	28	1660	370	146	173	130	70	163	157	170
12	238	153	28	1470	377	146	173	150	70	163	156	170
13	235	152	28	610	379	146	173	154	71	179	163	170
14	233	150	28	618	379	146	173	160	77	183	163	173
15	234	150	28	688	379	146	173	160	87	176	155	172
16	224	156	39	1050	340	146	173	165	97	184	150	170
17	218	157	61	1330	312	146	173	173	114	185	150	164
18	218	153	66	1590	312	145	168	173	119	184	150	160
19	218	153	81	1070	225	143	165	181	119	184	150	160
20	218	153	86	610	143	143	155	196	120	189	150	161
21	218	153	88	445	143	143	162	203	120	196	151	163
22	218	153	78	400	143	143	163	204	117	206	150	163
23	211	139	85	400	145	143	163	202	122	206	160	163
24	199	133	95	400	146	142	158	202	135	206	172	163
25	196	146	106	400	145	143	156	202	150	200	173	163
26	197	140	115	343	144	143	156	202	150	194	172	163
27	199	140	123	303	146	145	156	202	147	187	170	162
28	189	144	74	365	146	152	156	202	146	180	170	164
29	180	146	26	460	146	157	156	202	156	180	170	163
30	165	100	27	514	---	151	153	200	155	180	170	165
31	153	---	26	514	---	142	---	199	---	194	170	---
TOTAL	6811	4535	1604	24634	8801	4503	5014	5452	3123	5560	5038	5005
MEAN	220	151	51.7	795	303	145	167	176	104	179	163	167
MAX	242	166	123	2490	514	157	178	204	156	206	182	173
MIN	153	100	26	34	143	142	153	130	51	153	150	160
AC-FT	13510	9000	3180	48860	17460	8930	9950	10810	6190	11030	9990	9930

CAL YR 1987 TOTAL 68388 MEAN 187 MAX 1020 MIN 22 AC-FT 135600
WTR YR 1988 TOTAL 80080 MEAN 219 MAX 2490 MIN 26 AC-FT 158800

11462000 EAST FORK RUSSIAN RIVER NEAR UKIAH, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1953-55, 1964-68, 1973 to current year.
CHEMICAL DATA: Water years 1953-55, 1973-82.
BIOLOGICAL DATA: Water year 1977-78.
WATER TEMPERATURE: Water years 1953-55, 1965-68, 1973 to current year.
SEDIMENT DATA: Water years 1953-55, 1964-68.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: December 1952 to March 1955, October 1964 to September 1968, October 1972 to current year.
SUSPENDED-SEDIMENT DISCHARGE: December 1952 to March 1955, January 1964 to September 1968.

INSTRUMENTATION.--Water temperature recorder since October 1972. Digital recorder set for 1-hour interval punches.

REMARKS.--Records represent water temperature at sensor within 0.5 °C.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum recorded, 23.5 °C on several days in 1977; minimum recorded, 7.0 °C, Jan. 14, 1973, and on many days in 1984.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum recorded, 21.0 °C, Sept. 28-30; minimum recorded, 7.5 °C on many days.

WATER TEMPERATURE, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.5	20.0	18.0	18.0	12.0	12.0	8.0	7.5	8.0	8.0	8.0	8.0
2	20.5	20.0	18.0	18.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
3	20.5	20.0	18.0	17.5	12.5	12.0	8.0	7.5	8.0	8.0	8.0	8.0
4	20.5	20.0	17.5	17.0	12.5	12.0	8.0	7.5	8.0	8.0	8.5	8.0
5	20.5	20.0	17.0	17.0	12.0	12.0	8.0	8.0	8.0	7.5	8.5	8.0
6	20.5	20.0	17.0	17.0	12.5	12.0	8.0	8.0	8.0	7.5	8.5	8.0
7	---	---	17.0	17.0	12.5	12.0	8.0	8.0	8.0	7.5	8.5	8.0
8	---	---	17.0	16.5	12.0	11.5	8.0	8.0	8.0	7.5	8.5	8.0
9	---	---	17.0	17.0	11.5	11.5	8.0	8.0	8.0	7.5	8.5	8.0
10	---	---	17.0	16.5	11.5	11.0	8.0	8.0	8.0	7.5	8.5	8.0
11	---	---	16.5	16.0	11.5	11.0	8.0	8.0	8.0	7.5	8.5	8.0
12	---	---	16.0	16.0	11.0	10.5	8.0	8.0	8.0	7.5	8.5	8.0
13	---	---	16.0	15.5	11.5	10.5	8.0	8.0	8.0	7.5	8.5	8.0
14	20.5	20.0	16.0	16.0	11.0	10.5	8.0	8.0	8.0	7.5	8.5	8.0
15	20.0	20.0	16.0	15.5	10.5	10.0	8.0	8.0	8.0	7.5	8.5	8.0
16	20.0	19.5	15.5	15.0	10.5	10.0	8.0	8.0	8.0	7.5	8.5	8.0
17	19.5	19.5	15.0	15.0	10.5	10.0	8.0	8.0	8.0	7.5	8.5	8.0
18	19.5	19.5	15.0	15.0	10.5	10.0	8.0	8.0	8.0	7.5	8.5	8.0
19	19.5	19.0	15.0	14.5	10.0	9.5	8.0	8.0	8.0	7.5	8.5	8.0
20	19.0	19.0	15.0	15.0	9.5	9.5	8.0	8.0	8.0	7.5	8.5	8.0
21	19.0	18.5	15.0	15.0	9.5	9.5	8.0	8.0	8.0	7.5	8.5	8.0
22	18.5	18.5	15.0	14.5	9.5	9.5	8.0	8.0	8.0	7.5	8.5	8.0
23	18.5	18.5	14.0	14.0	9.5	9.0	8.0	8.0	8.0	7.5	8.5	8.0
24	18.5	18.0	14.0	13.5	9.5	9.5	8.0	8.0	8.0	7.5	8.5	8.0
25	18.5	18.0	14.0	13.5	9.0	9.0	8.0	8.0	8.0	7.5	8.5	8.0
26	18.5	18.0	13.5	13.0	9.0	8.5	8.0	7.5	8.0	8.0	8.5	8.5
27	18.5	18.0	13.0	12.5	8.5	8.5	8.0	7.5	8.0	8.0	8.5	8.5
28	18.0	18.0	12.5	12.5	8.5	8.5	8.0	8.0	8.0	8.0	9.0	8.5
29	18.0	18.0	12.5	12.5	9.0	8.5	8.0	8.0	8.0	8.0	9.0	8.5
30	18.0	18.0	12.5	12.0	8.5	8.0	8.0	8.0	---	---	9.0	8.5
31	18.5	18.0	---	---	8.0	7.5	8.0	8.0	---	---	9.0	8.5
MONTH	---	---	18.0	12.0	12.5	7.5	8.0	7.5	8.0	7.5	9.0	8.0

11462000 EAST FORK RUSSIAN RIVER NEAR UKIAH, CA--Continued

WATER TEMPERATURE, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.0	8.5	9.5	9.0	10.5	10.0	12.0	11.0	14.5	13.5	17.5	16.5
2	9.0	8.5	9.5	9.0	10.5	10.0	12.0	11.0	14.5	14.0	17.5	16.5
3	8.5	8.5	9.5	9.0	11.0	10.0	12.0	11.5	14.5	14.0	18.0	17.0
4	9.0	8.5	9.5	9.0	10.5	10.0	12.0	11.5	14.5	14.0	18.0	17.0
5	9.0	8.5	9.5	9.0	10.5	10.0	12.0	11.0	15.0	14.0	18.0	17.0
6	9.0	8.5	9.0	9.0	10.5	10.0	12.0	11.5	15.0	14.0	18.0	17.0
7	9.0	8.5	9.5	9.0	10.5	10.0	12.0	11.5	15.0	14.0	18.0	17.0
8	9.0	8.5	9.5	9.0	11.0	10.0	12.5	11.5	15.0	14.5	18.0	17.0
9	9.0	8.5	9.5	9.0	10.5	10.0	12.5	11.5	15.5	14.5	18.5	17.5
10	9.0	8.5	10.0	9.0	11.0	10.0	12.5	11.5	15.5	14.5	18.5	17.5
11	9.0	8.5	16.0	9.0	11.0	10.0	12.5	12.0	15.5	14.5	18.5	17.5
12	9.0	8.5	9.5	9.0	11.0	10.0	13.0	12.0	15.5	14.5	18.5	18.0
13	9.0	8.5	10.0	9.0	11.0	10.0	12.5	12.0	15.5	15.0	18.5	18.0
14	9.0	8.5	10.0	9.0	11.0	10.0	13.5	12.0	16.0	15.0	18.5	18.0
15	9.0	8.5	10.0	9.0	11.0	10.0	13.0	12.0	16.0	15.0	18.5	18.0
16	9.0	8.5	10.0	9.5	11.0	10.0	13.0	12.0	16.0	15.0	19.0	18.5
17	9.0	8.5	10.0	9.5	11.0	10.5	13.5	12.5	16.0	15.0	19.0	18.5
18	9.0	8.5	10.0	9.5	11.0	10.5	13.5	12.5	16.0	15.5	19.0	18.5
19	9.0	8.5	10.0	9.5	11.0	10.5	13.5	12.5	16.5	15.5	19.5	18.5
20	9.5	9.0	10.0	9.5	11.0	10.5	13.5	12.5	16.5	15.5	19.5	19.0
21	9.0	9.0	10.0	9.5	11.0	10.5	13.5	12.5	16.5	15.5	19.5	19.0
22	9.0	9.0	10.0	9.5	11.5	10.5	14.0	13.0	16.5	16.0	20.0	19.0
23	9.5	9.0	10.0	9.5	11.5	10.5	14.0	13.0	16.5	15.5	20.0	19.5
24	9.0	9.0	10.0	9.5	11.5	10.5	14.0	13.0	17.0	16.0	20.0	19.5
25	9.5	9.0	10.5	9.5	11.5	11.0	14.0	13.0	17.0	16.0	20.5	20.0
26	9.5	9.0	10.5	9.5	11.5	11.0	14.0	13.0	17.0	16.0	20.5	20.0
27	9.5	9.0	10.0	9.5	11.5	11.0	14.0	13.0	17.0	16.0	20.5	20.0
28	9.5	9.0	10.0	9.5	11.5	11.0	14.5	13.5	17.0	16.5	21.0	20.5
29	9.0	9.0	10.5	9.5	11.5	11.0	14.5	13.5	17.0	16.5	21.0	20.5
30	9.5	9.0	10.5	10.0	11.5	11.0	14.5	13.5	17.5	16.5	21.0	20.5
31	---	---	10.5	10.0	---	---	14.5	13.5	17.5	16.5	---	---
MONTH	9.5	8.5	16.0	9.0	11.5	10.0	14.5	11.0	17.5	13.5	21.0	16.5

11462500 RUSSIAN RIVER NEAR HOPLAND, CA

LOCATION.--Lat 39°01'36", long 123°07'46", in Rancho de Sanel Grant, Mendocino County, Hydrologic Unit 18010110, on right bank at abandoned highway bridge, 0.2 mi downstream from McNab Creek, 4 mi north of Hopland, and 15.2 mi downstream from Coyote Dam.

DRAINAGE AREA.--362 mi^2.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.--WSP 1041: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 497.61 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 9, 1943, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Diversions for irrigation of about 11,800 acres upstream from station. Flow also affected by diversion into basin (see REMARKS for East Fork Russian River stations) and since November 1958 by storage in Lake Mendocino (station 11461800) 15.2 mi upstream.

AVERAGE DISCHARGE.--49 years, 724 ft^3/s, 524,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,000 ft^3/s, Dec. 22, 1955, gage height, 27.00 ft; minimum daily, 9.1 ft^3/s, Apr. 20, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1937 reached a stage of 30.0 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,300 ft^3/s, Jan. 4, gage height, 14.04 ft; minimum daily, 76 ft^3/s, June 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	195	157	546	336	838	249	178	180	175	132	147	118
2	200	158	1960	334	798	244	202	200	120	127	137	119
3	200	157	1010	3200	731	235	211	204	111	138	138	121
4	198	160	979	7370	653	227	219	194	99	142	138	119
5	202	163	751	3960	630	226	217	183	96	145	127	123
6	197	163	2950	2950	612	224	208	188	100	133	119	125
7	197	163	1640	2190	596	224	206	217	94	122	111	129
8	199	164	2390	1510	580	215	190	205	81	120	115	129
9	203	166	2540	2550	568	209	197	186	76	126	117	129
10	206	165	3000	2200	551	200	217	184	77	127	117	131
11	205	158	1460	3480	528	194	212	170	86	130	119	132
12	211	156	779	2730	519	182	208	166	86	131	117	132
13	212	163	507	1610	511	185	193	165	86	135	130	136
14	205	156	377	1330	503	178	208	166	83	146	131	136
15	207	154	308	3050	498	177	211	174	81	131	134	138
16	208	154	338	3260	473	180	202	174	86	136	128	138
17	192	179	342	2840	424	181	203	184	92	139	125	137
18	188	191	288	2420	419	181	205	189	103	142	125	125
19	187	172	266	1880	382	181	230	185	108	136	123	127
20	193	199	249	1310	281	177	253	185	110	129	118	131
21	195	213	254	1050	270	183	234	178	111	131	116	135
22	197	182	275	902	265	183	230	183	108	139	118	132
23	214	171	251	827	259	177	243	188	103	144	119	128
24	195	153	241	770	252	175	218	180	107	148	127	128
25	188	159	237	727	247	176	215	182	109	152	130	127
26	187	160	235	674	244	182	210	195	110	142	135	129
27	190	156	243	566	243	181	194	196	123	142	122	131
28	206	156	510	619	255	154	195	193	119	135	118	131
29	188	156	914	973	254	182	189	196	130	129	125	134
30	179	201	562	1080	---	184	193	208	136	128	124	131
31	161	---	413	897	---	172	---	204	---	132	122	---
TOTAL	6105	5005	26817	59595	13384	6018	6291	5802	3106	4189	3872	3881
MEAN	197	167	865	1922	462	194	210	187	104	135	125	129
MAX	214	213	3000	7370	838	249	253	217	175	152	147	138
MIN	161	153	235	334	243	154	178	165	76	120	111	118
AC-FT	12110	9930	53190	118200	26550	11940	12480	11510	6160	8310	7680	7700

CAL YR 1987 TOTAL 131546 MEAN 360 MAX 3200 MIN 134 AC-FT 260900
WTR YR 1988 TOTAL 144065 MEAN 394 MAX 7370 MIN 76 AC-FT 285800

11463000 RUSSIAN RIVER NEAR CLOVERDALE, CA

LOCATION.--Lat 38°52'46", long 123°03'09", in NW 1/4 NW 1/4 sec.23, T.12 N., R.11 W., Mendocino County, Hydrologic Unit 18010110, on left bank 0.3 mi downstream from Cummisky Creek, 5.5 mi northwest of Cloverdale, and 28 mi downstream from Coyote Dam.

DRAINAGE AREA.--503 mi^2.

PERIOD OF RECORD.--July 1951 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 350 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to July 30, 1970, at site 0.2 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Diversions for irrigation of about 15,300 acres upstream from station. Flow also affected by diversion into basin (see REMARKS for East Fork Russian River stations) and since November 1958 by storage in Lake Mendocino (station 11461800).

AVERAGE DISCHARGE.--37 years, 991 ft^3/s, 718,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,200 ft^3/s, Dec. 22, 1964, gage height, 31.60 ft, site and datum then in use; minimum daily, 12 ft^3/s, Apr. 22, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18,500 ft^3/s, Jan. 4, gage height, 15.80 ft; minimum daily, 66 ft^3/s, June 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	174	142	831	647	1160	299	178	191	208	120	137	117
2	181	138	2980	618	1090	295	208	200	137	112	130	115
3	185	138	2290	4950	1010	284	219	205	119	120	133	117
4	184	141	2430	13500	886	278	222	204	109	125	134	118
5	190	144	1610	6050	838	270	217	190	109	129	129	117
6	191	145	6190	4020	805	265	209	195	109	128	121	111
7	190	146	3150	3040	781	263	206	213	110	109	108	117
8	192	147	4240	2260	753	254	187	228	98	101	110	119
9	194	153	3790	3250	730	247	192	216	89	99	101	122
10	194	153	4190	3190	705	232	189	210	89	103	103	124
11	193	146	2450	4620	671	215	198	201	89	110	114	126
12	199	140	1370	3900	649	189	196	174	91	113	114	129
13	201	156	921	2500	636	187	190	183	91	112	118	132
14	199	155	691	2000	627	187	195	176	87	120	123	134
15	198	144	574	4380	615	187	198	179	78	120	129	136
16	201	142	704	5020	599	188	195	179	66	118	126	138
17	195	170	662	4410	530	194	190	192	72	109	119	134
18	184	200	527	3630	512	206	190	198	80	112	113	119
19	180	175	462	2880	499	207	263	195	82	112	115	120
20	181	204	413	2110	374	198	324	188	89	99	107	124
21	186	250	399	1680	343	204	265	178	89	110	101	127
22	186	204	426	1420	330	209	243	182	91	121	106	128
23	203	184	386	1270	321	205	261	193	93	125	113	113
24	203	161	360	1160	312	202	252	194	94	133	115	117
25	184	151	344	1070	304	201	234	191	91	138	119	122
26	180	158	332	993	299	202	224	199	98	132	121	130
27	179	153	344	832	293	201	218	205	103	131	118	136
28	199	151	1020	843	318	151	214	205	108	124	112	135
29	189	151	1860	1230	316	184	211	207	111	123	117	133
30	173	294	1120	1600	---	195	209	212	117	112	123	133
31	153	---	810	1260	---	185	---	212	---	121	121	---
TOTAL	5841	4936	47876	90333	17306	6784	6497	6095	2997	3641	3650	3743
MEAN	188	165	1544	2914	597	219	217	197	99.9	117	118	125
MAX	203	294	6190	13500	1160	299	324	228	208	138	137	138
MIN	153	138	332	618	293	151	178	174	66	99	101	111
AC-FT	11590	9790	94960	179200	34330	13460	12890	12090	5940	7220	7240	7420

CAL YR 1987 TOTAL 191001 MEAN 523 MAX 6190 MIN 117 AC-FT 378900
WTR YR 1988 TOTAL 199699 MEAN 546 MAX 13500 MIN 66 AC-FT 396100

RUSSIAN RIVER BASIN

11463170 BIG SULPHUR CREEK AT GEYSERS RESORT, NEAR CLOVERDALE, CA

LOCATION.--Lat 38°47'52", long 122°48'05", in NW 1/4 NW 1/4 sec.19, T.11 N., R.8 W., Sonoma County, Hydrologic Unit 18010110, on left bank 400 ft downstream from unnamed tributary and 12 mi east of Cloverdale.

DRAINAGE AREA.--13.1 mi^2.

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,420 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Mar. 20-31. Records good. Diversion for industrial use 150 ft above station when flows are above 10 ft^3/s.

AVERAGE DISCHARGE.--8 years, 43.7 ft^3/s, 31,660 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,700 ft^3/s, Feb. 17, 1986, gage height, 8.98 ft, from rating curve extended above 1,200 ft^3/s on basis of culvert computation of peak flow; minimum daily, 0.08 ft^3/s, Aug. 31, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 1	1530	1,080	6.15	Dec. 6	0815	*2,170	*7.13

Minimum daily, 0.48 ft^3/s, Sept. 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.74	1.3	466	36	35	11	6.1	7.7	6.0	2.4	.92	.65
2	.69	1.4	571	35	31	12	5.8	7.1	6.0	2.3	.88	.64
3	.64	1.5	228	282	27	12	5.8	7.1	5.9	2.3	.93	.53
4	.56	1.6	214	506	25	12	5.8	7.1	5.5	2.1	.94	.66
5	.59	1.3	131	236	22	11	5.8	6.5	5.8	2.1	.90	.60
6	.69	1.5	769	129	20	10	5.5	7.7	5.8	2.1	.90	.51
7	.69	1.5	249	111	19	10	5.4	52	6.7	2.1	.90	.51
8	.60	2.0	259	92	16	10	5.1	26	7.0	2.1	.85	.48
9	.57	2.5	377	105	14	10	5.0	14	6.6	2.1	.73	.55
10	.59	1.9	325	130	12	9.6	5.1	11	6.2	2.1	.62	.58
11	.61	2.0	163	144	12	9.5	5.1	10	5.8	1.9	.61	.64
12	.60	2.1	102	97	11	9.1	5.1	10	5.4	1.9	.64	.56
13	.65	10	74	74	11	9.0	5.1	9.5	5.4	1.9	.77	.71
14	.63	2.1	59	68	11	8.5	5.1	8.7	4.9	1.9	.77	.65
15	.71	1.9	53	100	11	8.5	4.8	8.4	4.7	1.6	.73	.72
16	.76	1.5	61	274	12	8.5	4.7	11	4.1	1.7	.65	.65
17	.83	14	57	189	13	8.0	4.5	9.4	4.7	1.7	.63	.67
18	1.0	6.0	54	133	11	7.8	4.4	8.3	4.4	1.7	.65	.77
19	1.1	3.8	50	99	12	7.5	47	8.9	3.8	1.6	.65	.65
20	.96	18	45	80	12	7.4	23	9.1	3.5	1.5	.65	.61
21	.84	10	43	67	14	7.3	9.7	8.7	3.2	1.3	.65	.53
22	1.2	5.6	45	56	15	7.1	11	8.5	3.3	1.2	.59	.55
23	1.3	4.3	37	47	12	7.0	15	8.0	3.3	1.2	.51	.55
24	1.8	3.9	30	41	11	6.9	9.7	8.0	3.1	1.2	.52	1.2
25	1.3	3.8	28	35	12	6.8	7.8	7.4	3.0	1.2	.54	.77
26	1.3	3.6	25	30	13	6.8	9.1	7.1	2.7	1.2	.61	.75
27	1.4	3.5	31	27	12	6.8	9.5	6.5	2.7	1.2	.65	.72
28	2.9	3.5	64	27	15	6.6	8.6	6.6	2.7	1.1	.65	.70
29	1.8	3.5	55	67	10	6.5	8.9	7.5	2.6	1.0	.59	.77
30	1.7	52	45	51	---	6.4	8.1	7.0	2.5	1.0	.56	.77
31	1.6	---	39	40	---	6.2	---	6.5	---	1.0	.60	---
TOTAL	31.35	171.6	4749	3408	451	265.8	261.6	321.3	137.3	51.7	21.79	19.65
MEAN	1.01	5.72	153	110	15.6	8.57	8.72	10.4	4.58	1.67	.70	.65
MAX	2.9	52	769	506	35	12	47	52	7.0	2.4	.94	1.2
MIN	.56	1.3	25	27	10	6.2	4.4	6.5	2.5	1.0	.51	.48
AC-FT	62	340	9420	6760	895	527	519	637	272	103	43	39

CAL YR 1987 TOTAL 11147.93 MEAN 30.5 MAX 769 MIN .46 AC-FT 22110
WTR YR 1988 TOTAL 9890.09 MEAN 27.0 MAX 769 MIN .48 AC-FT 19620

11464000 RUSSIAN RIVER NEAR HEALDSBURG, CA

LOCATION.--Lat 38°36'48", long 122°50'07", in Sotoyome Grant, Sonoma County, Hydrologic Unit 18010110, on left bank 2 mi east of Healdsburg and 3.5 mi upstream from Dry Creek.

DRAINAGE AREA.--793 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.--WSP 981: 1942. WSP 1929: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 77.01 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: May 24-27 and Sept. 12. Records good. Several diversions for irrigation of about 17,800 acres above station. Flow also affected by diversion into basin (see REMARKS for East Fork Russian River stations) and since November 1958 by storage in Lake Mendocino (station 11461800) 63 mi upstream.

AVERAGE DISCHARGE.--49 years, 1,449 ft^3/s, 1,050,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 71,300 ft^3/s, Dec. 23, 1964, gage height, 27.00 ft; maximum gage height, 30.0 ft, Feb. 28, 1940; minimum daily discharge, 12 ft^3/s, June 14, 1988.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1937 reached a stage of 30.8 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 22,300 ft^3/s, Jan. 4, gage height, 13.00 ft; minimum daily, 12 ft^3/s, June 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	143	171	1050	1100	1730	457	222	260	229	95	89	92
2	144	158	4210	976	1600	440	222	246	228	98	99	93
3	145	153	3980	3660	1500	419	240	248	187	97	108	91
4	144	151	3170	18100	1360	404	254	246	162	99	107	90
5	145	152	3320	9030	1270	392	250	242	150	107	109	89
6	148	155	7760	5970	1200	384	245	239	137	112	110	86
7	149	156	6320	4640	1150	372	237	275	138	112	106	83
8	153	157	6120	3860	1110	364	227	397	138	103	98	81
9	155	167	5710	3920	1070	355	215	342	109	92	90	84
10	159	167	6080	4510	1030	341	212	295	97	83	87	88
11	162	163	4450	5580	981	326	215	274	89	78	82	89
12	164	156	2540	5300	945	306	215	257	26	80	85	91
13	170	177	1760	3850	914	282	219	245	17	81	92	97
14	174	200	1350	2970	888	268	219	238	12	82	95	102
15	171	187	1120	4770	866	260	223	233	38	83	98	104
16	171	172	1280	7330	839	255	220	235	99	86	102	105
17	174	189	1500	6630	793	257	217	242	98	83	103	152
18	168	224	1140	5270	740	259	218	241	94	74	98	107
19	163	232	968	4250	711	266	266	236	91	70	92	97
20	163	230	857	3300	656	263	490	230	89	71	90	93
21	166	319	783	2690	555	257	414	223	89	68	91	97
22	173	306	783	2290	518	261	338	218	92	64	85	99
23	194	253	736	2040	497	261	339	219	91	72	80	103
24	206	228	664	1830	479	258	341	220	86	81	83	96
25	199	205	617	1670	460	253	312	222	84	92	85	94
26	185	191	582	1540	449	250	293	220	85	101	86	97
27	182	187	558	1420	437	248	282	223	84	106	87	103
28	206	181	900	1300	477	241	273	225	86	105	91	103
29	209	178	2430	2050	485	221	272	230	90	101	88	100
30	199	253	1830	2450	---	230	269	230	89	97	85	98
31	186	---	1330	1960	---	230	---	229	---	92	89	---
TOTAL	5270	5818	75898	126256	25710	9380	7959	7680	3104	2765	2890	2904
MEAN	170	194	2448	4073	887	303	265	248	103	89.2	93.2	96.8
MAX	209	319	7760	18100	1730	457	490	397	229	112	110	152
MIN	143	151	558	976	437	221	212	218	12	64	80	81
AC-FT	10450	11540	150500	250400	51000	18610	15790	15230	6160	5480	5730	5760

CAL YR 1987 TOTAL 267064 MEAN 732 MAX 11100 MIN 105 AC-FT 529700
WTR YR 1988 TOTAL 275634 MEAN 753 MAX 18100 MIN 12 AC-FT 546700

11464000 RUSSIAN RIVER NEAR HEALDSBURG, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.
CHEMICAL DATA: Water years 1951-66, 1980.
WATER TEMPERATURE: Water years 1966 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1965 to current year.

INSTRUMENTATION.--Water temperature recorder since October 1965 provides hourly recordings.

REMARKS.--Records represent water temperature at sensor within 0.5 °C.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum recorded, 28.0 °C, July 13, 14, 1972, June 21, 1981, July 13, 1983, May 14, 15, 1987, and July 18, 1988; minimum recorded, 5.0 °C, Dec. 10, 11, 1972.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum recorded, 28.0 °C, July 18; minimum recorded, 6.5 °C, Dec. 30, Jan. 1.

WATER TEMPERATURE, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	22.5	19.0	18.0	15.5	13.0	12.0	8.0	6.5	9.5	8.0	15.0	13.0
2	23.0	18.0	17.0	14.5	13.5	13.0	8.5	8.0	9.5	7.5	15.0	12.0
3	23.5	18.0	17.0	13.5	14.0	13.5	8.5	7.5	9.5	7.5	16.0	13.0
4	23.5	18.5	17.0	13.5	13.5	13.0	9.0	7.5	9.5	7.5	16.0	13.0
5	23.5	19.0	16.0	15.0	13.0	12.5	10.0	9.0	10.0	8.0	16.5	14.0
6	23.0	18.5	16.5	15.5	13.0	12.0	9.5	8.5	10.5	8.5	16.5	13.5
7	22.0	19.5	17.5	15.5	12.0	11.5	9.0	9.0	11.0	9.0	17.0	13.0
8	21.0	17.5	17.0	14.0	11.5	11.0	10.0	9.0	12.0	9.5	16.5	13.0
9	20.0	18.0	17.5	15.5	13.0	11.5	10.5	10.0	13.0	11.0	15.5	13.0
10	20.5	17.5	16.5	14.0	14.0	13.0	11.0	10.5	13.0	11.0	15.0	11.5
11	21.5	17.0	16.0	13.0	13.0	11.0	11.0	9.0	13.0	11.5	15.0	11.0
12	20.5	18.0	16.0	13.0	10.5	9.5	9.0	8.0	13.0	11.0	16.0	11.0
13	20.0	17.5	18.0	15.0	9.5	8.0	10.0	8.5	12.5	11.0	16.0	11.0
14	20.0	17.0	15.0	13.0	9.5	8.0	10.5	9.5	12.5	10.5	16.5	11.5
15	21.0	16.5	15.5	11.5	9.5	9.0	10.5	9.5	12.5	11.0	17.0	12.5
16	21.0	17.0	15.5	12.5	9.0	8.5	10.0	9.5	12.5	11.0	17.0	12.5
17	20.0	15.5	15.5	14.0	10.5	9.0	9.5	8.5	12.0	10.5	19.0	13.0
18	19.5	15.5	15.5	13.0	10.5	9.0	9.5	8.0	12.0	10.5	19.0	12.5
19	19.0	15.5	15.5	13.0	10.5	9.5	9.5	8.0	12.5	10.5	19.5	13.5
20	18.5	16.0	15.0	13.5	10.5	9.5	10.0	8.0	12.5	10.5	19.5	13.5
21	19.0	15.5	14.0	12.0	11.0	10.0	10.5	8.5	13.5	11.0	20.5	14.5
22	17.5	17.0	13.5	11.5	11.0	10.0	11.0	9.5	14.0	11.5	20.0	14.5
23	19.0	17.0	13.5	11.0	10.0	8.5	11.5	9.5	13.5	12.5	18.5	15.5
24	20.0	17.0	13.5	11.0	8.5	7.5	11.5	9.5	14.0	12.5	19.5	13.5
25	20.5	17.0	12.5	10.0	8.5	7.0	11.5	9.5	14.0	12.5	20.0	14.5
26	20.5	17.0	12.0	9.0	8.5	7.5	11.0	10.0	16.0	13.0	20.5	15.0
27	20.5	18.0	12.5	9.0	9.0	8.5	11.5	10.0	16.0	14.0	18.0	14.0
28	20.0	18.5	11.5	9.5	9.0	8.5	11.5	10.5	16.5	14.0	18.5	12.5
29	19.5	17.5	11.5	9.0	8.5	7.5	11.5	11.0	15.0	14.0	19.0	13.5
30	19.0	16.5	12.5	11.0	8.0	6.5	11.5	10.0	---	---	18.5	13.5
31	19.0	16.0	---	---	8.0	7.0	10.0	8.5	---	---	19.0	13.5
MONTH	23.5	15.5	18.0	9.0	14.0	6.5	11.5	6.5	16.5	7.5	20.5	11.0

RUSSIAN RIVER BASIN

11464000 RUSSIAN RIVER NEAR HEALDSBURG, CA--Continued

WATER TEMPERATURE, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	19.5	14.0	19.0	12.0	23.5	19.0	25.5	23.0	25.0	23.5	---	---
2	19.5	14.0	20.0	13.0	24.5	20.0	27.0	24.5	23.5	22.0	---	---
3	17.0	15.0	21.0	14.5	24.5	20.5	26.0	24.5	24.0	22.0	---	---
4	19.5	13.5	19.0	14.0	22.5	19.5	25.0	24.0	24.5	23.0	---	---
5	20.5	14.0	18.0	13.0	21.0	17.5	24.5	23.5	24.0	22.5	---	---
6	21.0	15.0	16.5	13.0	19.5	17.5	24.5	23.0	24.0	22.5	---	---
7	20.0	16.0	17.5	14.0	20.0	17.0	25.5	24.0	24.0	22.5	---	---
8	19.5	13.5	18.0	15.0	20.0	17.0	25.5	24.0	24.5	22.5	---	---
9	21.0	14.0	20.5	15.0	21.0	18.5	26.0	23.5	24.5	22.5	---	---
10	22.0	15.5	23.0	15.5	23.0	19.0	26.5	24.0	24.0	22.5	---	---
11	22.5	16.5	24.5	17.5	23.5	21.0	26.0	24.0	23.0	22.0	---	---
12	20.0	16.5	21.5	18.0	24.0	21.5	26.0	23.5	21.5	20.5	---	---
13	17.5	15.5	22.5	16.0	24.5	22.5	26.0	24.0	22.0	20.0	---	---
14	17.0	15.0	24.0	16.5	24.5	22.5	26.0	24.0	23.5	21.0	---	---
15	21.0	14.0	24.5	17.5	23.5	22.0	25.5	23.5	23.5	21.5	---	---
16	19.5	16.5	20.5	17.5	22.0	21.5	26.5	23.5	24.0	22.5	---	---
17	22.0	15.0	22.5	15.5	23.0	21.0	27.5	25.0	24.5	23.0	22.5	18.0
18	19.0	16.0	22.5	15.5	25.5	22.5	28.0	26.0	24.5	23.0	23.5	17.0
19	16.5	15.0	24.0	17.0	27.0	24.5	27.0	25.0	25.0	23.5	22.5	17.0
20	16.5	14.0	25.5	18.5	25.5	24.0	26.0	24.5	24.5	22.5	23.0	16.5
21	16.5	14.0	26.0	19.5	25.0	23.5	26.5	23.5	24.0	22.5	21.5	16.5
22	15.5	13.5	24.0	18.5	25.5	23.5	26.5	23.5	24.0	22.5	23.0	17.5
23	19.0	13.0	24.5	18.5	27.0	24.5	26.5	24.0	24.5	22.5	22.5	16.5
24	19.5	14.0	25.0	18.0	26.5	24.5	25.0	24.0	24.5	22.5	20.0	16.0
25	20.0	13.5	24.0	19.0	26.0	24.5	25.5	23.5	25.0	23.0	21.0	17.0
26	21.5	15.5	23.5	19.5	25.0	23.5	24.5	23.0	25.5	23.5	22.0	15.5
27	21.0	16.5	24.0	19.0	25.5	24.0	24.5	22.5	25.0	23.0	22.5	17.0
28	20.5	17.0	22.0	19.5	24.0	22.0	25.0	23.5	24.5	23.0	23.0	17.0
29	20.0	16.0	20.5	17.0	23.5	21.0	25.5	24.0	24.5	22.5	23.0	17.0
30	18.0	14.5	21.5	16.5	24.5	22.0	26.0	24.0	25.0	23.0	23.0	17.0
31	---	---	22.5	17.5	---	---	25.5	23.5	24.5	23.0	---	---
MONTH	22.5	13.0	26.0	12.0	27.0	17.0	28.0	22.5	25.5	20.0	---	---

11464900 LAKE SONOMA NEAR GEYSERVILLE, CA

LOCATION.--Lat 38°43'21", long 123°00'36", in SW 1/4 SE 1/4 sec.7, T.10 N., R.10 W., Sonoma County, Hydrologic Unit 18010110, in reservoir control tower 400 ft upstream from Warm Springs Dam and 6.0 mi west of Geyserville.

DRAINAGE AREA.--130 mi^2.

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder. Elevation of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam; storage began in October 1983. Usable capacity 381,000 acre-ft between elevations 221.00 ft, invert of lowest outlet tunnel, and 495.00 ft, spillway crest. Water is released down Dry Creek for domestic use and fisheries. Records, including current year extremes, represent contents at 2400 hours.

COOPERATION.--Records were provided by U.S. Army Corps of Engineers; not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 264,347 acre-ft, Mar. 11, 1986, elevation, 458.19 ft; minimum after initial reservoir filling, 3,626 acre-ft, Nov. 2, 1984, elevation, 245.28 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 195,844 acre-ft, Jan. 16, elevation, 430.99 ft; minimum, 120,888 acre-ft, Nov. 29, elevation, 392.48 ft.

Capacity table (elevation, in feet NGVD, and contents, in acre-feet)
(Provided by U. S. Army Corps of Engineers, from 1964 survey)

221	111	280	14,286	360	75,150	440	217,014
230	1,151	300	24,025	380	101,566	460	269,406
240	2,621	320	37,003	400	133,654	480	329,768
260	7,265	340	53,833	420	171,956	495	380,681

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132586	126451	123532	160792	191720	193268	190693	187855	183237	175980	164741	156050
2	132411	126164	126080	161329	191944	193313	190537	187744	183064	175620	164417	155797
3	132202	125928	128031	168609	192123	193200	190448	187590	182869	175178	164115	155563
4	131993	125675	131941	179231	192280	193133	190337	187392	182652	174757	163873	155291
5	131802	125423	133128	182284	192437	193088	190270	187259	182457	174400	163511	155019
6	131558	125187	140691	183824	192661	193021	190092	187171	182327	174085	163210	154632
7	131350	124952	142607	185284	192796	192976	189914	187127	182197	173666	162909	154361
8	131124	124768	146008	186600	192909	192954	189803	186995	182068	173269	162708	154032
9	130917	124550	149577	187523	193021	192796	189692	186951	181938	173018	162448	153762
10	130709	124316	152013	188363	193133	192751	189559	186863	181809	172601	162188	153492
11	130502	124082	153203	189803	193200	192706	189426	186731	181614	172143	161928	153281
12	130295	123815	153840	191050	193245	192616	189204	186578	181485	171748	161589	152858
13	130053	123799	154226	191877	193291	192527	189071	186468	181313	171416	161389	152608
14	129846	123582	154477	192841	193313	192437	188960	186380	181076	171022	161091	152263
15	129623	123349	154903	194508	193358	192325	188827	186183	180839	170691	160931	152013
16	129451	123133	155621	195844	193313	192235	188694	186007	180667	170360	160733	151803
17	129279	123100	156069	193673	193358	192168	188517	185853	180559	170070	160474	151535
18	129056	122917	156361	192078	193336	192123	188407	185766	180430	169576	160237	151230
19	128799	122702	156557	190604	193358	192078	188694	185657	180087	169164	159840	150887
20	128577	122768	156694	190181	193336	191966	188827	185481	179809	168794	159563	150582
21	128406	122635	156869	190270	193336	191855	188783	185284	179573	168466	159326	150221
22	128252	122437	156987	190203	193268	191743	188716	185110	179380	168097	158990	149937
23	128150	122189	157026	190070	193200	191653	188694	184935	179124	167769	158832	149747
24	127996	121941	157045	189758	193223	191609	188583	184695	178633	167422	158695	149406
25	127809	121792	157045	189492	193268	191541	188540	184521	178313	167034	158419	149179
26	127621	121513	157006	189448	193268	191407	188495	184324	177930	166667	158026	148953
27	127452	121299	157202	189692	193268	191229	188318	184150	177526	166301	157692	148688
28	127316	121118	158104	190137	193336	191229	188230	183933	177080	165956	157378	148444
29	127129	120888	159346	190871	193313	191028	188141	183715	176783	165611	157065	148255
30	126925	121480	159959	191251	---	190916	187987	183541	176318	165226	156654	147973
31	126688	---	160435	191541	---	190805	---	183367	---	164861	156342	---
MAX	132586	126451	160435	195844	193358	193313	190693	187855	183237	175980	164741	156050
MIN	126688	120888	123532	160792	191720	190805	187987	183367	176318	164861	156342	147973
a	395.96	392.84	414.33	429.08	429.87	428.75	427.48	425.37	422.08	416.54	412.25	407.88
b	-6142	-5208	+38955	+31106	+1772	-2508	-2818	-4620	-7049	-11457	-8519	-8369

CAL YR 1987 MAX 211638 MIN 120888 b -10587
WTR YR 1988 MAX 195844 MIN 120888 b +15143

a Elevation, in feet NGVD, at end of month.
b Change in contents, in acre-feet.

11465000 DRY CREEK BELOW WARM SPRINGS DAM, NEAR GEYSERVILLE, CA

LOCATION.--Lat 38°43'11", long 122°59'58", in Tzabaco Grant, Sonoma County, Hydrologic Unit 18010110, on right bank of outlet channel, 500 ft downstream from Warm Springs Dam, 500 ft upstream from county road bridge, and 5.0 mi west of Geyserville.

DRAINAGE AREA.--131 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to September 1942 (published as "Dry Creek near Healdsburg"), October 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 188.21 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Sept. 30, 1942, nonrecording gage at site 500 ft downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow affected by storage in Lake Sonoma since October 1983.

AVERAGE DISCHARGE.--6 years (water years 1983-88), 226 ft^3/s, 163,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,500 ft^3/s, Feb. 28, 1940, gage height, 16.9 ft, datum then in use; no flow Oct. 1 to Dec. 8, 1939.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1937 reached a stage of 21.8 ft from floodmarks, discharge about 25,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,490 ft^3/s, Jan. 17, gage height, 8.57 ft; minimum daily, 71 ft^3/s, Feb. 16-24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	115	115	76	73	75	77	73	93	179	153	124
2	93	116	111	77	72	74	78	79	93	179	145	124
3	93	117	111	85	73	74	78	81	93	179	142	124
4	93	117	113	82	72	75	79	81	93	179	139	124
5	93	117	110	79	72	75	80	81	93	179	132	124
6	93	117	117	77	72	75	85	81	93	177	122	124
7	95	117	111	77	72	76	88	81	93	174	122	123
8	94	118	113	77	72	75	88	80	93	176	118	125
9	91	118	111	246	72	75	88	80	93	178	109	127
10	92	118	110	305	72	75	88	80	93	178	109	126
11	92	118	109	78	72	75	88	81	93	178	109	126
12	91	118	108	76	72	75	88	81	93	177	109	126
13	92	114	108	78	72	76	88	81	94	178	109	125
14	92	109	106	79	72	75	89	81	94	177	109	125
15	91	109	105	79	72	76	88	81	98	172	109	125
16	91	109	105	1010	71	75	87	83	101	163	107	125
17	91	109	104	2070	71	75	87	86	101	163	106	125
18	91	109	104	1330	71	76	87	86	104	163	108	125
19	92	111	104	1250	71	75	80	86	111	163	111	125
20	93	114	104	718	71	75	74	90	117	162	111	125
21	93	113	104	401	71	75	74	93	124	165	111	125
22	93	113	104	405	71	76	73	94	138	167	111	121
23	91	113	104	405	71	77	74	93	165	167	111	115
24	88	113	104	406	71	77	74	93	175	167	111	115
25	88	113	104	376	78	77	74	93	177	167	119	115
26	88	113	104	236	82	76	73	93	177	165	124	115
27	88	113	105	78	82	77	73	93	177	160	124	115
28	88	114	105	76	83	77	73	93	168	158	124	113
29	88	114	105	74	79	77	74	94	179	158	124	108
30	98	115	105	73	---	77	74	93	179	158	180	108
31	115	---	88	73	---	78	---	94	---	158	125	---
TOTAL	2865	3424	3311	10552	2125	2346	2421	2659	3595	5264	3743	3647
MEAN	92.4	114	107	340	73.3	75.7	80.7	85.8	120	170	121	122
MAX	115	118	117	2070	83	78	89	94	179	179	180	127
MIN	88	109	88	73	71	74	73	73	93	158	106	108
AC-FT	5680	6790	6570	20930	4210	4650	4800	5270	7130	10440	7420	7230

CAL YR 1987 TOTAL 62462 MEAN 171 MAX 1050 MIN 77 AC-FT 123900
WTR YR 1988 TOTAL 45952 MEAN 126 MAX 2070 MIN 71 AC-FT 91150

11465000 DRY CREEK BELOW WARM SPRINGS DAM, NEAR GEYSERVILLE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
WATER TEMPERATURE: November 1981 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: November 1981 to current year.

INSTRUMENTATION.--Temperature recorder.

REMARKS.--Water temperature is affected by regulation from Warm Springs Dam.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum recorded, 27.0 °C, July 11, Aug. 5, 6, 8, 12, 15, 16, 1983; minimum recorded, 6.5 °C, Jan. 20, 1982.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum recorded, 17.5 °C, Oct. 17, 18, Aug. 30, 31; minimum recorded, 9.0 °C, on several days.

WATER TEMPERATURE, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.5	15.0	16.5	16.0	13.0	13.0	10.5	10.5	9.5	9.5	10.0	9.5
2	16.5	15.5	16.5	16.0	13.0	13.0	10.5	10.5	9.5	9.0	10.0	9.5
3	16.5	16.0	16.0	15.5	13.0	13.0	10.5	10.0	9.5	9.0	10.0	9.5
4	16.5	16.0	16.0	15.5	13.0	12.5	10.5	10.0	9.5	9.5	10.0	9.5
5	16.0	15.5	16.0	15.5	13.0	12.5	10.5	10.5	9.5	9.5	10.0	9.5
6	16.5	15.5	15.5	15.5	13.0	12.0	10.5	10.5	10.0	9.5	10.0	9.5
7	16.0	15.5	16.0	15.5	12.5	12.5	10.5	10.0	10.0	9.5	10.0	9.5
8	16.5	15.5	15.5	15.5	13.0	11.5	10.5	10.0	10.0	9.5	10.0	9.5
9	16.5	16.0	15.5	15.5	12.5	12.5	10.5	9.0	10.0	9.5	10.0	9.5
10	16.5	16.0	15.5	15.5	13.0	12.5	10.5	9.0	10.0	9.5	10.0	9.5
11	16.5	16.0	15.5	15.5	13.0	12.5	10.5	10.5	10.0	9.5	10.0	9.5
12	17.0	16.0	15.5	15.5	12.5	12.5	10.0	9.0	10.0	9.5	10.0	9.5
13	17.0	15.5	15.5	15.0	12.5	12.0	9.5	9.0	10.0	9.5	10.0	9.5
14	16.5	16.0	15.5	15.0	12.5	12.0	9.5	9.0	10.0	9.5	10.0	9.5
15	16.5	16.0	15.0	15.0	12.0	11.5	9.5	9.0	10.0	9.5	10.0	9.5
16	17.0	16.5	15.0	15.0	11.5	11.5	9.5	9.0	10.0	9.5	10.0	9.5
17	17.5	16.5	15.0	14.5	12.0	11.5	9.5	9.5	10.0	9.5	10.0	9.5
18	17.5	16.5	15.0	14.5	12.0	11.5	9.5	9.0	10.0	9.5	10.0	9.5
19	16.5	15.0	15.0	14.5	11.5	11.5	9.5	9.5	10.0	9.5	10.0	9.5
20	15.5	15.5	14.5	14.5	11.5	11.5	9.5	9.5	10.0	9.5	10.0	9.5
21	16.0	15.5	14.5	14.5	11.5	11.5	9.5	9.5	10.0	9.5	10.0	9.5
22	16.0	15.5	14.5	14.0	11.5	11.5	9.5	9.5	10.0	9.5	10.0	9.5
23	16.0	15.5	14.5	14.0	11.5	11.0	9.5	9.5	10.0	9.5	10.0	10.0
24	16.0	15.5	14.0	14.0	11.0	11.0	9.5	9.5	10.0	9.5	10.0	9.5
25	16.5	16.0	14.0	13.5	11.0	11.0	9.5	9.5	10.0	9.5	10.5	9.5
26	16.0	15.5	13.5	13.5	11.0	11.0	9.5	9.5	10.0	9.5	10.5	10.0
27	16.0	15.5	13.5	13.5	11.0	10.5	9.5	9.5	10.0	9.5	10.0	9.5
28	15.5	15.5	13.5	13.0	11.0	10.5	9.5	9.5	10.0	9.5	10.0	9.5
29	16.0	15.5	13.0	13.0	11.0	10.5	9.5	9.5	10.0	9.5	10.0	9.5
30	16.0	15.5	13.0	13.0	10.5	10.5	9.5	9.5	---	---	10.0	9.5
31	16.5	16.0	---	---	10.5	10.5	9.5	9.5	---	---	10.5	9.5
MONTH	17.5	15.0	16.5	13.0	13.0	10.5	10.5	9.0	10.0	9.0	10.5	9.5

RUSSIAN RIVER BASIN

11465000 DRY CREEK BELOW WARM SPRINGS DAM, NEAR GEYSERVILLE, CA--Continued

WATER TEMPERATURE, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.5	16.0	15.0
2	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.5	15.0	13.5
3	10.0	10.0	10.5	10.0	11.0	10.0	10.5	10.0	10.5	10.5	13.5	12.5
4	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.5	12.5	11.5
5	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.5	11.5	11.0
6	10.5	10.0	10.0	10.0	10.0	10.0	10.5	10.0	10.5	10.5	11.0	10.5
7	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.5	11.0	10.5
8	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.0	11.0	10.5	12.5	10.5
9	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.0	11.0	10.5	12.5	12.5
10	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.0	11.0	10.5	12.5	12.5
11	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.0	11.0	10.5	12.5	12.5
12	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.5	12.5	12.5
13	10.0	10.0	10.5	10.0	10.5	10.0	10.5	10.0	11.0	10.5	12.5	12.5
14	10.0	10.0	10.5	10.0	10.5	10.0	10.5	10.0	11.0	10.5	12.5	12.5
15	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.5	11.0	10.5	12.5	12.5
16	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.5	11.0	10.5	12.5	12.5
17	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.5	11.0	10.5	12.5	12.5
18	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.5	11.0	10.5	12.5	12.5
19	10.0	10.0	10.5	10.0	10.5	10.0	10.5	10.5	11.0	10.5	12.5	12.5
20	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.5	11.0	10.5	12.5	12.5
21	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.5	11.0	10.5	12.5	12.5
22	10.0	10.0	10.5	10.0	10.5	10.0	10.5	10.5	11.0	10.5	12.5	12.5
23	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.5	11.0	10.5	12.5	12.5
24	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.5	11.0	10.5	12.5	12.5
25	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.5	11.0	10.5	12.5	12.5
26	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.5	11.0	10.5	12.5	12.5
27	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.0	11.0	10.5	13.0	12.5
28	10.5	10.0	10.5	10.0	14.0	10.0	10.5	10.5	11.0	10.5	13.0	13.0
29	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.5	11.0	10.5	13.0	12.5
30	10.5	10.0	10.5	10.0	10.5	10.0	10.5	10.5	17.5	10.5	12.5	12.5
31	---	---	10.5	10.0	---	---	10.5	10.5	17.5	16.0	---	---
MONTH	10.5	10.0	10.5	10.0	14.0	10.0	10.5	10.0	17.5	10.5	16.0	10.5

RUSSIAN RIVER BASIN

11465150 PENA CREEK NEAR GEYSERVILLE, CA

LOCATION.--Lat 38°42'02", long 122°58'16", in sec.21, T.10 N., R.10 W., Sonoma County, Hydrologic Unit 18010110, on right bank on upstream side of bridge on West Dry Creek Road, 1.1 mi upstream from mouth, and 3.7 mi west of Geyserville.

DRAINAGE AREA.--22.3 mi^2.

PERIOD OF RECORD.--October 1978 to current year.
WATER TEMPERATURE: Water years 1979-86.
SEDIMENT DATA: Water years 1979-87.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 195 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. No regulation; some small diversion for irrigation of less than 200 acres in summer months.

AVERAGE DISCHARGE.--10 years, 47.4 ft^3/s, 34,340 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,710 ft^3/s, Jan. 26, 1983, gage height, 9.01 ft; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 950 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 6	0915	*1,390	*5.71	Jan. 4	0545	1,330	5.62

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	53	32	47	9.2	2.7	2.1	.00	.00	.00	.00
2	.00	.00	72	30	42	8.5	2.5	1.9	.00	.00	.00	.00
3	.00	.00	90	390	36	8.1	2.3	1.9	.00	.00	.00	.00
4	.00	.00	142	910	32	7.7	2.6	1.5	.00	.00	.00	.00
5	.00	.00	70	331	30	6.9	2.3	1.3	.00	.00	.00	.00
6	.00	.00	488	178	27	7.4	2.3	1.4	.00	.00	.00	.00
7	.00	.00	186	126	24	7.0	2.1	2.9	.00	.00	.00	.00
8	.00	.00	249	96	22	7.1	2.0	2.1	.00	.00	.00	.00
9	.00	.00	199	87	21	6.6	2.3	1.6	.00	.00	.00	.00
10	.00	.00	161	87	20	6.5	2.5	1.5	.00	.00	.00	.00
11	.00	.00	95	109	18	6.1	2.2	1.5	.00	.00	.00	.00
12	.00	.00	53	86	17	6.0	1.7	1.2	.00	.00	.00	.00
13	.00	.00	32	68	17	5.9	1.6	1.2	.00	.00	.00	.00
14	.00	.00	27	54	16	5.3	1.7	.99	.00	.00	.00	.00
15	.00	.00	31	88	15	5.4	1.9	.87	.00	.00	.00	.00
16	.00	.00	70	318	15	5.2	1.6	.87	.00	.00	.00	.00
17	.00	.54	64	300	14	4.7	1.6	.92	.00	.00	.00	.00
18	.00	.77	44	207	13	4.8	1.3	.61	.00	.00	.00	.00
19	.00	.00	34	147	12	4.7	12	.52	.00	.00	.00	.00
20	.00	1.9	27	106	12	4.4	8.2	.37	.00	.00	.00	.00
21	.00	1.5	25	80	11	4.2	10	.02	.00	.00	.00	.00
22	.00	.21	23	62	10	3.8	5.8	.00	.00	.00	.00	.00
23	.00	.00	20	51	9.8	4.0	5.8	.00	.00	.00	.00	.00
24	.00	.00	18	45	9.6	3.8	5.2	.00	.00	.00	.00	.00
25	.00	.00	16	40	9.3	3.8	4.5	.00	.00	.00	.00	.00
26	.00	.00	15	37	9.5	3.7	3.7	.00	.00	.00	.00	.00
27	.00	.00	16	32	9.3	3.4	3.2	.00	.00	.00	.00	.00
28	.00	.00	67	30	13	2.9	2.6	.00	.00	.00	.00	.00
29	.00	.00	75	76	9.8	2.3	3.2	.00	.00	.00	.00	.00
30	.00	11	50	57	---	2.9	2.4	.00	.00	.00	.00	.00
31	.00	---	38	52	---	3.0	---	.00	---	.00	.00	---
TOTAL	0.00	15.92	2550	4312	541.3	165.3	103.8	27.27	0.00	0.00	0.00	0.00
MEAN	.00	.53	82.3	139	18.7	5.33	3.46	.88	.00	.00	.00	.00
MAX	.00	11	488	910	47	9.2	12	2.9	.00	.00	.00	.00
MIN	.00	.00	15	30	9.3	2.3	1.3	.00	.00	.00	.00	.00
AC-FT	.0	32	5060	8550	1070	328	206	54	.0	.0	.0	.0

CAL YR 1987 TOTAL 7928.63 MEAN 21.7 MAX 548 MIN .00 AC-FT 15730
WTR YR 1988 TOTAL 7715.59 MEAN 21.1 MAX 910 MIN .00 AC-FT 15300

11465200 DRY CREEK NEAR GEYSERVILLE, CA

LOCATION.--Lat 38°41'55", long 122°57'25", in Tzabaco Grant, Sonoma County, Hydrologic Unit 18010110, on left bank pier of bridge 0.3 mi downstream from Pena Creek and 3 mi west of Geyserville.

DRAINAGE AREA.--162 mi^2.

PERIOD OF RECORD.--October 1959 to current year.
CHEMICAL DATA: Water years 1971-81.
WATER TEMPERATURE: Water years 1964-86.
SEDIMENT DATA: Water years 1964-87.
TURBIDITY: Water years 1964-86.

REVISED RECORDS.--WDR CA-65-1: 1962(M), 1963(M).

GAGE.--Water-stage recorder. Datum of gage is 156.40 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1964, at datum 4.00 ft higher. Oct. 1, 1964, to Apr. 8, 1976, at datum 3.00 ft higher; Apr. 9, 1976, to Sept. 30, 1982, at datum 2.00 ft higher.

REMARKS.--Estimated daily discharges: Jan. 18-21. Records good. Small diversions above station for irrigation of about 1,200 acres in summer. Flow regulated by Lake Sonoma (station 11464900) 3.0 mi upstream beginning October 1983.

AVERAGE DISCHARGE.--24 years (water years 1959-83), 342 ft^3/s, 248,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,400 ft^3/s, Jan. 31, 1963, gage height, 20.50 ft, present datum; no flow at times. Maximum discharge since regulation by Lake Sonoma, 5,280 ft^3/s, Feb. 17, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,990 ft^3/s, Jan. 16, gage height, 9.47 ft; minimum daily, 79 ft^3/s, Apr. 25 to May 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	111	213	130	137	89	83	79	91	177	167	132
2	91	111	234	129	131	88	82	81	92	179	156	130
3	91	113	262	638	126	87	82	82	91	177	156	130
4	91	113	370	1280	119	86	82	82	91	176	153	130
5	93	113	205	493	108	86	84	82	91	177	144	129
6	91	113	819	309	107	86	87	83	91	178	129	129
7	93	113	304	250	106	87	89	83	91	176	130	129
8	96	114	446	214	104	88	89	82	91	179	126	130
9	94	114	388	357	102	87	90	84	92	183	113	131
10	94	114	340	473	101	87	89	86	92	183	112	132
11	93	114	229	233	99	87	89	87	92	183	113	132
12	93	114	191	201	98	88	88	86	91	183	113	133
13	91	116	168	181	96	87	87	84	92	184	111	133
14	93	106	157	169	96	86	88	86	91	183	111	133
15	91	104	163	215	96	86	88	85	93	178	111	132
16	90	104	219	1330	100	86	85	86	95	168	110	132
17	90	111	210	2510	96	86	86	88	95	169	107	131
18	90	106	185	1680	91	87	87	88	99	168	111	132
19	91	107	171	1530	90	86	94	89	109	168	116	133
20	94	114	159	875	88	86	86	91	112	167	114	133
21	94	107	155	550	87	86	87	93	122	169	115	132
22	96	106	151	527	86	86	80	93	139	171	115	129
23	96	110	144	514	86	86	81	93	166	172	115	122
24	90	110	145	509	85	85	80	93	178	172	115	123
25	90	108	145	479	89	84	79	93	178	172	125	123
26	90	108	134	343	93	84	79	93	180	173	134	124
27	88	108	132	140	93	83	79	93	180	171	132	123
28	91	108	195	129	98	85	79	91	185	169	132	120
29	90	108	218	182	92	85	79	91	177	169	133	115
30	94	126	187	157	---	84	79	92	176	170	199	114
31	107	---	156	143	---	83	---	93	---	170	135	---
TOTAL	2867	3324	7195	16870	2900	2667	2537	2712	3563	5414	3953	3851
MEAN	92.5	111	232	544	100	86.0	84.6	87.5	119	175	128	128
MAX	107	126	819	2510	137	89	94	93	185	184	199	133
MIN	88	104	132	129	85	83	79	79	91	167	107	114
AC-FT	5690	6590	14270	33460	5750	5290	5030	5380	7070	10740	7840	7640

CAL YR 1987 TOTAL 77727 MEAN 213 MAX 1300 MIN 84 AC-FT 154200
WTR YR 1988 TOTAL 57853 MEAN 158 MAX 2510 MIN 79 AC-FT 114800

11465350 DRY CREEK NEAR MOUTH, NEAR HEALDSBURG, CA

LOCATION.--Lat 38°35'15", long 122°51'40", in Sotoyome Grant, Sonoma County, Hydrologic Unit 18010110, on right bank 0.25 mi upstream from mouth, 0.4 mi downstream from Mill Creek, 1.7 mi south of Healdsburg, and 13.5 mi downstream from Warm Springs Dam.

DRAINAGE AREA.--217 mi^2.

PERIOD OF RECORD.--November 1980 to current year (low flow only).

GAGE.--Water-stage recorder. Elevation of gage is 50 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. No records computed above 200 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	101	---	184	---	108	76	77	83	157	142	119
2	79	102	---	179	---	104	72	78	82	157	134	115
3	80	104	---	---	192	103	75	82	81	159	133	115
4	82	105	---	---	181	102	77	81	81	160	129	114
5	82	105	---	---	171	102	78	80	82	161	127	113
6	79	105	---	---	164	100	78	81	82	160	113	113
7	77	105	---	---	158	98	83	88	84	156	109	113
8	85	105	---	---	153	98	83	85	82	156	109	113
9	85	108	---	---	147	97	83	82	82	161	98	118
10	86	107	---	---	141	96	83	81	82	159	94	119
11	86	107	---	---	137	95	83	82	81	160	93	119
12	86	107	---	---	133	95	81	80	80	159	93	118
13	85	120	---	---	130	90	81	80	78	159	94	117
14	83	107	---	---	127	86	82	79	79	158	94	118
15	83	105	---	---	125	85	83	79	79	158	93	119
16	84	105	---	---	127	86	82	79	84	147	92	119
17	85	118	---	---	126	89	81	81	86	143	90	119
18	85	108	---	---	119	90	82	81	86	141	89	118
19	84	107	---	---	115	90	140	80	93	140	93	116
20	87	120	190	---	112	89	108	81	96	142	94	116
21	86	113	183	---	110	89	102	85	105	143	95	115
22	86	110	180	---	109	88	91	85	113	145	94	115
23	101	110	170	---	109	89	91	86	130	143	94	107
24	88	110	164	---	107	87	85	85	149	145	95	106
25	85	110	160	---	105	86	83	85	156	147	98	105
26	85	110	155	---	112	85	81	84	159	146	108	108
27	85	110	161	---	113	84	80	84	160	144	110	108
28	94	110	---	---	133	83	80	84	159	141	111	107
29	86	110	---	---	117	82	81	83	163	140	111	101
30	85	174	---	---	---	81	78	83	159	138	159	98
31	99	---	---	---	---	80	---	83	---	140	136	---
TOTAL	2644	3318	---	---	---	2837	2543	2544	3116	4665	3324	3401
MEAN	85.3	111	---	---	---	91.5	84.8	82.1	104	150	107	113
MAX	101	174	---	---	---	108	140	88	163	161	159	119
MIN	77	101	---	---	---	80	72	77	78	138	89	98
AC-FT	5240	6580	---	---	---	5630	5040	5050	6180	9250	6590	6750

RUSSIAN RIVER BASIN

11466500 LAGUNA DE SANTA ROSA NEAR GRATON, CA

LOCATION.--Lat 38°27'10", long 122°50'03", in Molinos Grant, Sonoma County, Hydrologic Unit 18010110, on downstream side of left bank pier of highway bridge, 0.2 mi downstream from Santa Rosa Creek, and 2 mi northeast of Graton.

PERIOD OF RECORD.--February 1940 to September 1949 (contents only), October 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Dec. 31, 1958, at site 75 ft downstream at same datum.

REMARKS.--The laguna is a natural water channel and overflow basin connecting Santa Rosa Creek, Mark West Creek, and other smaller creeks with the Russian River. During floods directions of flow may be either to or from the Russian River, and the laguna acts as a natural regulator of floods on the lower Russian River. Figures given herein represent only those days when the elevation was above 55.0 ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 74.6 ft, Feb. 18, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 59.7 ft, Jan. 4.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	57.90	---	---	---	---	---	---	---	---
4	---	---	---	59.70	---	---	---	---	---	---	---	---
5	---	---	---	57.50	---	---	---	---	---	---	---	---
6	---	---	55.40	56.00	---	---	---	---	---	---	---	---
7	---	---	55.50	55.40	---	---	---	---	---	---	---	---
8	---	---	56.90	---	---	---	---	---	---	---	---	---
9	---	---	58.40	---	---	---	---	---	---	---	---	---
10	---	---	57.40	---	---	---	---	---	---	---	---	---
11	---	---	55.90	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	57.00	---	---	---	---	---	---	---	---
17	---	---	---	56.60	---	---	---	---	---	---	---	---
18	---	---	---	55.60	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

11467000 RUSSIAN RIVER NEAR GUERNEVILLE, CA
(National stream-quality accounting network station)

LOCATION.--Lat 38°30'31", long 122°55'36", in NE 1/4 SE 1/4 sec.26, T.8 N., R.10 W., Sonoma County, Hydrologic Unit 18010110, on right bank at downstream side of Hacienda bridge, 0.1 mi upstream from Hobson Creek, and 3.8 mi east of Guerneville.

DRAINAGE AREA.--1,338 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1954, published as "at Guerneville."

REVISED RECORDS.--WSP 1395: Drainage area at former site. WSP 1929: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 20.14 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1954, nonrecording gage at bridge 5.3 mi downstream at datum 8.58 ft lower. Oct. 1, 1954, to Oct. 23, 1974, at site 0.7 mi downstream at datum 2.75 ft lower. Supplementary water-stage recorder 2.1 mi downstream used during periods of low flow, 1948-54.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Lake Mendocino (station 11461800) 77 mi upstream, since November 1958, and by Lake Sonoma (station 11464900) 26 mi upstream, since October 1983. Many diversions above station for irrigation of about 29,000 acres. Flow also affected by diversion into basin (see REMARKS for East Fork Russian River stations), and by diversion at Wohler pumping plant beginning in May 1959.

AVERAGE DISCHARGE.--49 years, 2,338 ft^3/s, 1,644,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 102,000 ft^3/s, Feb. 18, 1986, gage height, 48.56 ft, from rating curve extended above 39,000 ft^3/s; maximum gage height, 49.7 ft, Dec. 23, 1955, site and datum then in use, from floodmarks; minimum daily discharge, 0.75 ft^3/s, May 6, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35,300 ft^3/s, Jan. 4, gage height, 28.35 ft; minimum daily, 98 ft^3/s, June 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	165	259	1110	1640	2340	653	341	391	255	160	153	131
2	160	245	4690	1430	2100	634	291	370	250	165	151	128
3	164	242	5750	4330	1920	608	267	366	242	160	161	126
4	168	240	4250	28700	1750	584	335	361	214	159	161	125
5	164	239	5230	21000	1600	565	329	351	207	164	162	128
6	164	239	8590	10700	1500	555	307	341	190	161	156	128
7	162	239	11800	7650	1430	543	325	312	216	156	153	129
8	176	239	9490	6400	1360	530	320	457	218	161	148	131
9	174	250	10900	5450	1290	523	319	427	200	161	144	130
10	195	245	11900	6620	1240	518	315	404	196	162	137	134
11	196	250	8720	7490	1180	497	310	346	177	155	134	136
12	198	353	5100	7390	1130	468	300	313	160	152	135	222
13	201	299	3320	5670	1090	431	266	292	151	155	133	181
14	206	311	2450	4260	1050	405	272	288	143	151	132	157
15	208	305	1960	5700	1020	394	273	268	112	148	134	150
16	209	284	1980	10200	997	390	271	263	98	135	132	150
17	212	314	2570	13600	961	389	266	282	120	134	133	153
18	215	345	2050	10700	908	388	265	287	115	132	127	184
19	209	343	1690	8040	873	391	486	281	109	132	125	160
20	207	362	1450	6240	837	387	709	264	108	136	118	158
21	207	439	1280	4490	754	381	646	260	126	135	128	156
22	209	469	1230	3700	707	381	543	251	145	134	125	158
23	244	415	1150	3150	684	383	551	226	140	132	121	159
24	257	381	1030	2820	668	381	552	210	145	133	126	155
25	250	354	948	2560	649	379	503	173	139	132	128	150
26	237	329	876	2320	637	365	470	208	143	141	127	152
27	229	317	836	1950	624	361	445	239	146	149	129	148
28	263	308	1320	1700	683	363	424	253	146	152	130	147
29	282	297	2790	2850	693	346	412	248	150	157	125	150
30	270	443	2750	3470	---	341	404	252	159	153	127	144
31	261	---	2040	2740	---	352	---	262	---	152	141	---
TOTAL	6462	9355	121250	204960	32675	13888	11517	9246	4920	4609	4236	4460
MEAN	208	312	3911	6612	1127	448	384	298	164	149	137	149
MAX	282	469	11900	28700	2340	653	709	457	255	165	162	222
MIN	160	239	836	1430	624	341	265	173	98	132	118	125
AC-FT	12820	18560	240500	406500	64810	27540	22840	18340	9760	9140	8400	8850

CAL YR 1987 TOTAL 455004 MEAN 1247 MAX 21800 MIN 141 AC-FT 902500
WTR YR 1988 TOTAL 427576 MEAN 1168 MAX 28700 MIN 98 AC-FT 848100

11467000 RUSSIAN RIVER NEAR GUERNEVILLE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.
CHEMICAL DATA: Water years 1951 to current year. Published as "at Guerneville" in 1961-65.
BIOLOGICAL DATA: Water years 1975-81.
SPECIFIC CONDUCTANCE: Water years 1974-81.
WATER TEMPERATURE: Water years 1964-86.
SEDIMENT DATA: Water years 1966 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1973 to September 1981.
WATER TEMPERATURE: January 1964 to September 1986.
SUSPENDED-SEDIMENT DISCHARGE: April to September 1967, October 1969 to September 1986.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (FTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)
NOV												
17...	0940	305	256	7.70	14.0	0.50	765	9.8	95	50	140	110
JAN												
20...	1225	6270	183	7.60	8.5	40	775	11.2	94	87	150	80
MAR												
08...	1100	529	297	8.10	14.0	2.5	770	9.9	95	K28	K5	120
MAY												
16...	1255	264	287	8.20	20.0	1.6	765	8.2	90	K12	170	120
JUL												
07...	1300	157	222	8.30	22.5	3.2	765	8.0	92	K14	110	99
SEP												
06...	1055	124	228	8.30	20.5	0.50	760	8.6	96	K13	44	100

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	CARBONATE WATER WH IT FIELD MG/L AS CO3	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)
NOV												
17...	4	23	13	11	17	0.5	2.8	132	--	108	107	16
JAN												
20...	0	16	9.6	7.5	17	0.4	1.6	96	--	78	80	14
MAR												
08...	0	24	15	12	17	0.5	1.6	151	--	124	124	17
MAY												
16...	0	25	15	13	18	0.5	1.4	155	--	127	128	19
JUL												
07...	0	20	12	8.7	16	0.4	0.90	113	8	107	106	12
SEP												
06...	1	20	13	9.2	16	0.4	1.0	123	1	103	103	11

See footnotes at end of table.

11467000 RUSSIAN RIVER NEAR GUERNEVILLE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)
NOV												
17...	10	0.20	14	160	155	0.22	<0.010	<0.100	0.010	0.010	<0.20	0.060
JAN												
20...	5.7	0.20	16	117	121	0.16	<0.010	0.400	0.050	0.040	0.20	0.120
MAR												
08...	11	0.20	12	161	168	0.22	<0.010	0.240	0.020	0.020	<0.20	0.090
MAY												
16...	9.4	0.20	13	168	175	0.23	0.030	0.210	0.140	0.140	0.30	0.190
JUL												
07...	5.4	0.10	13	133	136	0.18	<0.010	<0.100	<0.010	0.010	0.40	0.070
SEP												
06...	5.1	0.10	14	190	136	0.26	<0.010	<0.100	<0.010	0.020	0.30	0.030

DATE	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)
NOV											
17...	0.040	0.040	<10	1	69	<0.5	<1	<1	<3	1	12
JAN											
20...	0.080	0.060	20	<1	45	<0.5	1	<1	<3	2	41
MAR											
08...	0.070	0.050	--	--	--	--	--	--	--	--	--
MAY											
16...	0.170	0.130	<10	1	73	<0.5	<1	1	<3	<1	5
JUL											
07...	0.070	0.070	--	--	--	--	--	--	--	--	--
SEP											
06...	0.030	0.020	<10	<1	63	<0.5	<1	<1	<3	<1	14

DATE	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
NOV											
17...	<5	<4	10	<0.1	<10	<1	<1	<1.0	210	<6	<3
JAN											
20...	<5	<4	7	<0.1	<10	2	<1	1.0	150	<6	12
MAR											
08...	--	--	--	--	--	--	--	--	--	--	--
MAY											
16...	<5	6	22	<0.1	<10	2	<1	<1.0	230	<6	<3
JUL											
07...	--	--	--	--	--	--	--	--	--	--	--
SEP											
06...	<5	<4	7	<0.1	<10	<1	<1	<1.0	190	<6	<3

K Results based on colony count outside the acceptable range (non-ideal colony count).
< Actual value is known to be less than value shown.

11467000 RUSSIAN RIVER NEAR GUERNEVILLE, CA--Continued

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	SEDI- MENT, SUS- PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR										
08...*	1105	13.5	297	8.10	14.0	770	9.9	95	11	83
08...*	1110	27.0	297	8.10	14.0	770	9.9	95	10	89
08...*	1115	43.0	297	8.20	14.0	770	9.9	95	7	96
08...*	1120	57.0	297	8.10	14.0	770	9.9	95	8	86
08...*	1125	73.0	298	8.20	14.0	770	9.9	95	8	90
SEP										
02...*	1530	7.60	209	8.10	21.5	765	8.9	101	3	--
02...*	1535	13.9	215	8.10	21.5	765	8.9	101	4	--
02...*	1540	19.4	215	8.10	21.5	765	9.0	102	4	--
02...*	1545	24.5	214	8.10	21.5	765	9.0	102	5	--
02...*	1550	30.7	213	8.10	22.0	765	8.9	101	6	--

* Instantaneous streamflow at the time of cross-sectional measurement: Mar. 8; 529 ft^3/s; Sept. 2; 128 ft^3/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV						
17...	1010	305	14.0	4	3.3	74
JAN						
20...	1350	6210	8.5	98	1640	74
MAR						
08...	1050	529	14.0	8	11	89
MAY						
16...	1300	264	20.0	6	4.3	94
JUL						
07...	1310	157	22.5	10	4.2	90
SEP						
02...	1430	128	21.5	4	1.4	96
06...	1040	124	20.5	6	2.0	84

11468000 NAVARRO RIVER NEAR NAVARRO, CA

LOCATION.--Lat 39°10'20", long 123°40'06", in SE 1/4 sec.7, T.15 N., R.16 W., Mendocino County, Hydrologic Unit 18010108, on right bank 2.9 mi downstream from North Fork, 5.2 mi upstream from mouth, and 6.8 mi west of Navarro.

DRAINAGE AREA.--303 mi^2.

PERIOD OF RECORD.--October 1950 to current year.

REVISED RECORDS.--WSP 1445: 1954(M). WSP 1929: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 4.79 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1969, at site 0.2 mi upstream at datum 1.86 ft higher.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--38 years, 528 ft^3/s, 382,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 64,500 ft^3/s, Dec. 22, 1955, gage height, 40.60 ft, site and datum then in use, from rating curve extended above 19,000 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 0.23 ft^3/s, July 13, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1937 reached a stage of 38.2 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 6	1415	11,700	18.65	Jan. 4	0545	*12,300	*19.16

Minimum daily, 1.1 ft^3/s, Sept. 14,15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	24	404	617	360	111	43	51	21	7.4	2.3	1.5
2	2.5	20	2170	542	330	108	43	45	20	7.3	2.3	1.4
3	2.5	20	1880	1760	303	98	43	42	18	6.8	2.3	1.4
4	2.5	19	3550	8850	281	92	45	41	21	6.5	2.3	1.4
5	2.5	18	2550	3410	259	91	45	39	21	6.2	2.2	1.4
6	2.9	18	5620	1810	242	89	41	40	21	6.1	2.3	1.4
7	3.1	18	2940	1260	227	85	41	50	22	6.2	2.3	1.4
8	3.1	18	3260	1180	214	82	40	57	26	5.7	2.3	1.3
9	3.5	19	2470	1160	205	79	36	53	26	5.4	2.3	1.3
10	3.5	21	3070	1360	194	75	36	46	25	5.1	2.3	1.2
11	3.9	28	2040	2190	185	72	36	42	22	5.2	2.3	1.3
12	4.3	28	1140	1790	177	71	36	39	20	5.7	2.3	1.3
13	5.1	31	745	1250	168	69	35	37	19	5.1	2.2	1.2
14	5.6	44	535	980	160	68	35	37	18	4.9	2.1	1.1
15	5.9	42	426	2350	155	67	38	35	16	4.9	2.4	1.1
16	6.5	32	461	2670	147	65	41	36	16	4.9	2.5	1.4
17	6.5	32	522	2650	142	63	38	41	16	4.6	2.4	1.5
18	6.5	43	386	1860	135	62	36	39	15	4.3	2.4	1.4
19	7.2	46	326	1290	131	61	64	34	14	4.1	2.3	1.4
20	7.2	53	281	1010	125	60	167	31	13	3.9	2.2	1.4
21	7.2	122	264	807	121	59	155	29	13	3.4	2.1	1.3
22	7.5	95	297	658	117	59	119	27	12	3.1	2.2	1.3
23	9.3	60	304	549	114	61	122	26	12	2.9	2.1	1.4
24	17	45	252	483	111	62	107	24	11	3.1	1.9	1.4
25	26	37	231	422	108	59	85	22	10	3.0	1.8	1.4
26	23	32	215	377	106	56	73	21	9.5	2.8	1.7	1.4
27	19	29	198	338	103	54	63	21	8.2	2.8	1.8	1.5
28	27	27	334	309	104	51	58	21	7.6	2.6	1.6	1.5
29	41	25	1110	389	116	47	56	23	7.0	2.6	1.5	1.4
30	35	48	982	515	---	45	55	24	6.8	2.5	1.5	1.4
31	29	---	743	403	---	43	---	22	---	2.3	1.5	---
TOTAL	328.3	1094	39706	45239	5140	2164	1832	1095	487.1	141.4	65.7	40.8
MEAN	10.6	36.5	1281	1459	177	69.8	61.1	35.3	16.2	4.56	2.12	1.36
MAX	41	122	5620	8850	360	111	167	57	26	7.4	2.5	1.5
MIN	2.5	18	198	309	103	43	35	21	6.8	2.3	1.5	1.1
AC-FT	651	2170	78760	89730	10200	4290	3630	2170	966	280	130	81

CAL YR 1987 TOTAL 113790.5 MEAN 312 MAX 5620 MIN 2.4 AC-FT 225700
WTR YR 1988 TOTAL 97333.3 MEAN 266 MAX 8850 MIN 1.1 AC-FT 193100

11468500 NOYO RIVER NEAR FORT BRAGG, CA

LOCATION.--Lat 39°25'42", long 123°44'12", in NE 1/4 sec.15, T.18 N., R.17 W., Mendocino County, Hydrologic Unit 18010108, on right bank 0.7 mi downstream from South Fork and 3.5 mi east of Fort Bragg.

DRAINAGE AREA.--106 mi^2.

PERIOD OF RECORD.--August 1951 to current year.

REVISED RECORDS.--WSP 1929: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 11.73 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 8-22, Sept. 16-30. Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--37 years, 215 ft^3/s, 155,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,600 ft^3/s, Mar. 29, 1974, gage height, 27.14 ft, from rating curve extended above 4,500 ft^3/s on basis of slope-conveyance study; minimum daily, 0.79 ft^3/s, Sept. 8, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 10	Unknown	*3,560	*11.72				

Minimum daily, 2.6 ft^3/s, Oct. 6-10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	5.1	303	137	193	50	23	26	19	8.9	4.5	2.9
2	3.3	4.7	1060	134	174	46	23	24	21	8.9	4.3	3.1
3	5.7	4.5	652	293	156	43	25	23	19	9.2	4.4	2.9
4	9.5	4.2	1050	1200	139	41	25	22	19	8.8	4.4	2.9
5	3.0	4.1	702	846	126	40	23	21	19	8.4	4.7	2.9
6	2.6	4.3	1270	544	115	40	23	23	18	8.0	4.5	2.9
7	2.6	4.5	935	431	107	38	22	33	20	7.9	4.5	2.9
8	2.6	5.1	800	467	99	37	21	31	23	7.6	4.5	2.8
9	2.6	9.3	1490	782	92	36	21	28	23	7.1	4.2	2.9
10	2.6	9.4	2330	1170	86	34	20	26	22	6.9	4.1	2.9
11	2.8	7.2	1200	1630	82	34	20	24	20	6.8	4.2	2.9
12	2.9	6.2	620	1190	77	34	19	23	18	6.5	3.9	2.9
13	3.1	30	385	782	73	32	19	24	17	6.7	4.1	2.8
14	3.2	29	290	590	69	32	21	22	16	6.6	4.0	2.9
15	3.2	15	215	1270	66	32	21	15	15	6.5	3.9	2.9
16	3.2	11	265	1270	63	31	21	25	15	6.4	3.8	2.9
17	3.2	20	205	1070	60	30	21	26	14	6.1	3.8	2.9
18	3.4	28	160	754	58	29	21	23	14	5.9	3.6	2.9
19	3.2	18	130	541	56	28	36	21	14	5.6	3.5	2.9
20	3.1	41	108	412	53	28	43	20	13	5.3	3.6	2.9
21	3.1	57	137	335	52	28	51	19	12	5.0	3.6	2.9
22	3.5	31	90	281	51	27	43	17	12	5.1	3.3	2.9
23	4.7	21	79	240	50	30	50	17	11	4.9	3.1	2.9
24	6.8	16	70	210	49	28	44	16	11	5.1	3.1	2.8
25	6.0	13	63	183	47	27	37	16	11	4.8	3.1	2.8
26	4.5	12	58	163	47	26	33	16	11	4.8	3.4	2.8
27	4.1	11	55	147	46	26	30	15	10	4.8	3.1	2.8
28	7.1	11	82	140	47	25	28	17	9.6	4.5	3.1	2.8
29	7.5	11	155	186	45	24	29	17	9.4	4.4	3.1	2.8
30	6.3	61	168	236	---	24	28	17	9.0	4.5	2.9	2.8
31	5.1	---	155	211	---	24	---	16	---	4.8	2.9	---
TOTAL	127.7	504.6	15282	17845	2378	1004	841	663	465.0	196.8	117.2	86.3
MEAN	4.12	16.8	493	576	82.0	32.4	28.0	21.4	15.5	6.35	3.78	2.88
MAX	9.5	61	2330	1630	193	50	51	33	23	9.2	4.7	3.1
MIN	2.6	4.1	55	134	45	24	19	15	9.0	4.4	2.9	2.8
AC-FT	253	1000	30310	35400	4720	1990	1670	1320	922	390	232	171

CAL YR 1987 TOTAL 54397.2 MEAN 149 MAX 2330 MIN 2.6 AC-FT 107900
WTR YR 1988 TOTAL 39510.6 MEAN 108 MAX 2330 MIN 2.6 AC-FT 78370

MATTOLE RIVER BASIN

11469000 MATTOLE RIVER NEAR PETROLIA, CA

LOCATION.--Lat 40°18'42", long 124°15'48", in SE 1/4 NW 1/4 (revised), sec.11, T.2 S., R.2 W., Humboldt County, Hydrologic Unit 18010107, on right bank 0.2 mi upstream from Clear Creek, 1.5 mi southeast of Petrolia, and 1.7 mi upstream from North Fork.

DRAINAGE AREA.--240 mi^2.

PERIOD OF RECORD.--October 1911 to December 1913, October 1950 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.--WSP 1285: 1912-13. WSP 1929: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 40 ft above National Geodetic Vertical Datum of 1929, from topographic map. November 1911 to December 1913, nonrecording gages at several sites upstream within 0.3 mi of present site at various datums. Dec. 11, 1950, to July 14, 1955, at site 0.3 mi upstream at datum 7.48 ft higher. July 15, 1955, to Oct. 26, 1967, at site 0.4 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Diversions for irrigation of about 350 acres above station.

AVERAGE DISCHARGE.--40 years, 1,351 ft^3/s, 978,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 90,400 ft^3/s, Dec. 22, 1955, gage height, 29.60 ft, site and datum then in use, from rating curve extended above 26,000 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 17 ft^3/s, Sept. 5, 15, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 15,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 2	1600	23,600	16.01	Dec. 10	0900	*27,500	*17.21
Dec. 6	0915	19,100	14.49				

Minimum daily, 20 ft^3/s, Oct. 7-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	30	5280	2160	1090	297	128	264	823	127	45	30
2	22	31	17200	1950	993	272	130	216	1280	123	45	30
3	22	30	8860	3800	902	249	137	193	1350	120	44	29
4	22	29	9710	6370	834	240	143	177	1130	115	44	28
5	22	28	5850	4650	773	245	132	170	939	113	44	28
6	21	28	12100	3300	723	237	124	166	789	107	45	28
7	20	28	6400	3150	682	227	122	371	657	104	45	27
8	20	31	6200	3700	640	218	120	374	550	102	45	26
9	20	57	7610	6230	604	215	114	295	496	96	43	26
10	21	59	19200	7420	570	206	111	251	469	91	43	27
11	22	50	7260	8750	541	199	108	221	412	89	42	26
12	22	41	4270	5210	517	190	106	235	370	85	41	26
13	23	146	2910	3800	492	185	104	352	338	85	40	26
14	23	208	2310	4900	465	178	104	297	309	83	40	25
15	23	98	2660	8550	446	176	104	253	282	83	41	25
16	23	71	2750	7920	424	170	104	323	264	79	40	26
17	23	167	2170	5610	403	165	103	390	252	76	40	26
18	23	274	1860	3820	387	160	99	323	235	73	38	25
19	23	133	1650	2700	370	157	285	274	219	69	37	25
20	23	183	1480	2090	356	151	389	245	210	65	36	25
21	23	329	1480	1800	346	154	231	223	194	63	35	24
22	24	202	1460	1600	333	155	200	205	184	60	35	24
23	25	129	1390	1450	323	166	225	189	177	57	35	25
24	31	98	1270	1300	312	181	202	179	166	56	34	25
25	29	84	1190	1170	302	158	171	167	159	54	34	26
26	28	73	1130	1050	291	149	154	157	153	53	33	26
27	28	66	1150	957	282	145	141	152	147	53	32	26
28	27	62	2630	908	270	140	138	174	141	51	32	26
29	27	57	3410	1460	269	137	391	214	136	50	32	25
30	27	240	2900	1460	---	132	355	185	131	49	31	25
31	28	---	2500	1210	---	129	---	161	---	46	30	---
TOTAL	738	3062	148240	110445	14940	5783	4975	7396	12962	2477	1201	786
MEAN	23.8	102	4782	3563	515	187	166	239	432	79.9	38.7	26.2
MAX	31	329	19200	8750	1090	297	391	390	1350	127	45	30
MIN	20	28	1130	908	269	129	99	152	131	46	30	24
AC-FT	1460	6070	294000	219100	29630	11470	9870	14670	25710	4910	2380	1560

CAL YR 1987 TOTAL 436645 MEAN 1196 MAX 19200 MIN 20 AC-FT 866100
WTR YR 1988 TOTAL 313005 MEAN 855 MAX 19200 MIN 20 AC-FT 620800

11470000 LAKE PILLSBURY NEAR POTTER VALLEY, CA

LOCATION.--Lat 39°24'30", long 122°57'30", on line between secs.14 and 23, T.18 N., R.10 W., Lake County, Hydrologic Unit 18010103, Mendocino National Forest, at Scott Dam near right bank of Eel River, 0.3 mi downstream from Rice Fork, and 10.2 mi northeast of town of Potter Valley.

DRAINAGE AREA.--289 mi^2.

PERIOD OF RECORD.--October 1922 to September 1928 (daily gage heights only), October 1928 to current year. Monthend contents only for some periods, published in WSP 1315-B. Prior to October 1953, published as "at Hullville".

GAGE.--Water-stage recorder and nonrecording gage. Datum of gage is 81.7 ft below National Geodetic Vertical Datum of 1929 (river-profile survey). Prior to Jan. 26, 1950, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by concrete overflow type dam; storage began in December 1921. Beginning Oct. 1, 1985, capacity based on 1984 resurvey. Usable capacity, 80,556 acre-ft between gage heights 1,822.4 ft, sill of outlet gate, and 1,910.0 ft, top of spillway gates; dead storage, 87 acre-ft. Water is released down Eel River to Van Arsdale Reservoir, most of which is diverted through tunnel to Potter Valley powerplant; part is then used for irrigation and remainder flows into East Fork Russian River. Records given herein represent total contents.

COOPERATION.--Records were provided by Pacific Gas & Electric Co., in connection with a Federal Energy Regulatory Commission project; not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 95,600 acre-ft, May 13, 16, 1925, gage height, 1,910.8 ft; maximum gage height, 1,911.84 ft, Dec. 22, 1964, from floodmarks; minimum contents, 10 acre-ft, Dec. 9, 10, 1931, gage height, 1,822.5 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 63,998 acre-ft, Dec. 11, gage height, 1,902.27 ft; minimum, 19,759 acre-ft, Nov. 30, gage height, 1,872.30 ft.

Capacity table (elevation, in feet, and contents in acre-feet)
(Based on table dated April 1984 provided by Pacific Gas & Electric Co.)

1,822.4	87	1,835	1,371	1,855	7,831	1,875	22,450	1,895	50,180
1,824	153	1,840	2,463	1,860	10,460	1,880	28,070	1,900	59,470
1,827	333	1,845	3,391	1,865	13,700	1,885	34,470	1,905	69,680
1,830	626	1,850	5,710	1,870	17,660	1,890	41,810	1,910	80,640

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31665	24050	19998	56562	60625	56543	52683	53635	51815	46592	38319	29796
2	31422	23821	23038	56260	60487	56505	52465	53598	51654	46272	38039	29546
3	31205	23659	30009	56034	60271	56392	52320	53487	51475	46004	37805	29262
4	30948	23422	33379	61875	60094	56109	52194	53396	51385	45887	37456	28930
5	30731	23208	36608	63896	59938	55865	52013	53304	51296	45569	37239	28625
6	30463	23049	38794	62095	59801	55696	51833	53176	51171	45319	36908	28334
7	30248	22858	47305	61139	59684	55434	51618	53176	51046	45037	36608	28058
8	30021	22627	51153	61020	59606	55062	51439	53377	50975	44739	36295	27805
9	29783	22460	55509	61059	59489	54877	51278	53524	50869	44493	36040	27518
10	29584	22325	61715	61995	59548	54858	51100	53469	50780	44198	35716	27244
11	29360	22108	63998	62658	59431	54765	50886	53506	50585	44002	35423	26891
12	29102	21943	62215	62537	59411	54617	50674	53414	50462	43726	35145	26610
13	28893	21759	61139	61616	59411	54468	50462	53414	50321	43402	34868	26297
14	28698	21658	60585	61158	59372	54263	50409	53359	50144	43193	34648	26021
15	28431	21556	60173	61238	59333	54096	50374	53304	49967	42872	34320	25645
16	28238	21394	59997	61795	59235	54115	50338	53212	49878	42617	34009	25407
17	28034	21224	59821	62075	59157	54096	50250	53212	49666	42331	33699	25126
18	27769	21304	59626	61556	59059	54078	50215	53249	49507	41983	33445	24913
19	27565	21244	59470	61040	58767	54059	50127	53194	49226	41731	33139	24723
20	27339	21094	59138	60684	58515	54059	50745	53066	49068	41481	32862	24501
21	27020	21054	59059	60369	58302	54022	51349	52956	48858	41465	32573	24313
22	26552	21044	58904	60192	58090	53948	51707	52902	48684	41092	32273	24050
23	26182	20905	58884	60192	57840	53837	52176	52810	48423	40844	32104	23864
24	25838	20747	58632	61212	57609	53893	52338	52719	48198	40597	32026	23669
25	25452	20570	58380	60290	57322	53745	52610	52538	48043	40259	31871	23465
26	25205	20443	57974	60290	57113	53616	52829	52483	47767	40000	31524	23219
27	24946	20258	57609	60212	56770	53506	52975	52320	47561	39742	31269	23038
28	24712	20084	57265	60232	56543	53432	53176	52194	47339	39424	30974	22816
29	24611	19950	57265	60310	56619	53231	53286	52121	47066	39138	30654	22586
30	24412	19759	57170	61099	---	53139	53487	51995	46829	38854	30362	22408
31	24269	---	56979	60960	---	52865	---	51887	---	38571	30122	---
MAX	31665	24050	63998	63896	60625	56543	53487	53635	51815	46592	38319	29796
MIN	24269	19759	19998	56034	56543	52865	50127	51887	46829	38571	30122	22408
a	1876.70	1872.30	1898.71	1900.76	1898.52	1896.50	1896.84	1895.96	1893.07	1887.88	1881.67	1874.96
b	-7601	-4510	+37220	+3981	-4341	-3754	+622	-1600	-5058	-8258	-8449	-7714

CAL YR 1987 Max 66944 Min 13395 b +44118
WTR YR 1988 Max 63998 Min 19759 b -9462

a Elevation in feet, NGVD, at end of month.
b Change in contents, in acre-feet.

11470500 EEL RIVER BELOW SCOTT DAM, NEAR POTTER VALLEY, CA

LOCATION.--Lat 39°24'29", long 122°58'29", in SE 1/4 sec.15, T.18 N., R.10 W., Lake County, Hydrologic Unit 18010103, Mendocino National Forest, on left bank 0.4 mi upstream from Soda Creek, 0.7 mi downstream from Scott Dam, and 9.7 mi northeast of town of Potter Valley.

DRAINAGE AREA.--290 mi^2.

PERIOD OF RECORD.--October 1922 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1929, published as South Eel River at Hullville, and October 1929 to September 1953, "at Hullville."

REVISED RECORDS.--WSP 1315-B: 1923(M), 1938(M). WSP 1395: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,740 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 15. 1930, at datum 3.00 ft higher.

REMARKS.--Flow regulated by Lake Pillsbury (station 11470000) 0.7 mi upstream. No diversion above station.

COOPERATION.--Records collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

AVERAGE DISCHARGE.--66 years, 561 ft^3/s, 406,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,300 ft^3/s, Dec. 22, 1964, gage height, 24.24 ft, from floodmarks, from rating curve extended above 9,400 ft^3/s on basis of computed flow over Scott Dam at gage heights 18.50 and 21.85 ft; minimum daily, 0.1 ft^3/s, Sept. 8, 1924.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,400 ft^3/s, Jan. 4, gage height, 10.65 ft; minimum daily, 39 ft^3/s, Aug. 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	117	116	97	435	991	435	214	117	148	140	142	144
2	118	115	57	436	862	435	210	164	159	140	142	144
3	118	115	58	567	731	435	208	196	133	139	143	144
4	118	115	66	4580	679	435	208	187	133	139	143	145
5	117	116	87	3250	614	434	208	186	132	139	143	145
6	117	116	109	1860	564	434	205	186	132	139	143	144
7	117	116	107	1310	526	433	203	186	133	139	143	144
8	117	115	174	1300	497	349	201	185	132	141	143	143
9	117	115	451	1810	487	283	197	184	132	143	142	143
10	117	115	3730	2270	483	277	194	180	132	143	142	143
11	117	115	3110	3240	475	277	194	177	132	142	142	143
12	118	115	1760	2340	472	277	194	177	132	141	142	143
13	117	115	1100	1650	465	276	190	176	132	141	142	143
14	118	115	796	1430	453	276	158	176	135	141	142	143
15	117	115	642	2140	444	206	132	176	139	141	142	143
16	117	114	554	2310	441	160	128	155	139	141	142	123
17	116	115	484	2120	436	163	127	139	139	141	141	105
18	117	115	427	1580	434	164	127	138	139	141	141	106
19	117	114	434	1230	434	164	129	135	139	140	143	107
20	117	115	442	992	434	164	124	134	139	141	144	107
21	116	113	439	871	434	188	120	136	138	142	144	107
22	192	111	438	824	433	210	120	140	138	142	89	107
23	216	111	443	833	434	210	120	142	138	142	39	107
24	217	110	445	885	433	210	120	142	137	142	77	108
25	217	110	445	901	433	210	120	142	137	142	142	108
26	175	110	444	883	433	210	120	139	137	142	143	108
27	118	110	444	856	433	210	120	137	137	142	142	108
28	117	110	445	834	435	210	119	135	137	142	144	107
29	118	109	445	1100	435	211	119	133	137	142	144	107
30	117	111	441	1440	---	212	118	133	138	142	144	107
31	116	---	436	1200	---	214	---	132	---	142	144	---
TOTAL	4063	3407	19550	47477	14855	8372	4747	4865	4105	4374	4199	3776
MEAN	131	114	631	1532	512	270	158	157	137	141	135	126
MAX	217	116	3730	4580	991	435	214	196	159	143	144	145
MIN	116	109	57	435	433	160	118	117	132	139	39	105
AC-FT	8060	6760	38780	94170	29460	16610	9420	9650	8140	8680	8330	7490

CAL YR 1987 TOTAL 100939 MEAN 277 MAX 5500 MIN 48 AC-FT 200200
WTR YR 1988 TOTAL 123790 MEAN 338 MAX 4580 MIN 39 AC-FT 245500

11471000 POTTER VALLEY POWERPLANT INTAKE NEAR POTTER VALLEY, CA

LOCATION.--Lat 39°22'00", long 123°07'35", in SW 1/4 SW 1/4 sec.31, T.18 N., R.11 W., Mendocino County, Hydrologic Unit 18010103, in penstock of powerplant of Pacific Gas & Electric Co., 1.5 mi southwest of Van Arsdale Dam, and 3.2 mi northwest of town of Potter Valley.

PERIOD OF RECORD.--December 1909 to current year. Prior to October 1922, monthly discharge only, published in WSP 1315-B. Prior to October 1931, published as Snow Mountain Water and Power Co.'s Tailrace near Potter Valley. October 1931 to September 1984, published as Potter Valley Powerhouse Tailrace near Potter Valley.

REVISED RECORDS.--WSP 1395: 1950.

GAGE.--Acoustic flowmeter in penstock of powerplant. Elevation of gage is 1,440 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 11, 1985, water-stage recorder and Parshall flume. See WSP 1929 for history of changes prior to Apr. 12, 1950.

REMARKS.--Water is diverted from Eel River above Van Arsdale Dam. After passing through powerplant, part is used for irrigation in Potter Valley and remainder flows into East Fork Russian River.

COOPERATION.--Records collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

AVERAGE DISCHARGE.--78 years (water years 1911-88), 203 ft^3/s, 147,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (1922 TO CURRENT YEAR).--Maximum daily discharge, 351 ft^3/s, Oct. 31, 1982; no flow at times in several years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	62	187	296	291	301	87	91	121	124	125	125
2	92	90	226	296	289	301	86	91	121	123	123	125
3	93	91	220	296	296	299	88	96	118	125	129	123
4	92	91	164	124	296	295	90	88	128	122	122	124
5	93	91	150	188	297	292	91	93	128	124	122	124
6	93	92	210	295	298	290	94	93	128	121	126	125
7	93	91	276	295	298	290	91	94	125	126	122	124
8	91	88	271	295	298	237	92	94	123	127	123	122
9	91	94	274	295	298	158	93	108	122	129	123	125
10	92	88	87	295	297	156	91	105	121	124	125	123
11	92	88	175	294	297	156	93	89	125	126	124	125
12	93	88	295	295	296	156	92	87	126	123	126	124
13	94	110	295	296	295	156	94	90	127	122	106	123
14	88	90	295	296	295	156	93	90	125	124	121	124
15	89	91	296	295	295	107	93	105	121	121	123	126
16	93	90	295	295	295	35	94	123	123	124	125	109
17	91	114	295	295	295	45	93	125	122	126	125	93
18	91	98	295	294	295	43	93	121	121	122	123	90
19	92	91	295	292	297	42	120	122	123	123	123	93
20	125	109	295	290	298	38	125	124	124	126	123	93
21	194	110	295	292	301	62	121	126	124	124	124	91
22	193	95	295	294	301	92	122	125	124	123	102	90
23	191	93	296	295	301	93	123	121	116	122	28	92
24	172	93	296	295	301	90	103	121	123	123	10	93
25	161	88	295	284	297	90	107	121	126	123	116	94
26	90	88	295	299	297	89	92	121	121	123	126	93
27	91	88	281	299	295	88	92	121	124	123	125	93
28	104	88	296	299	299	87	88	121	123	125	120	91
29	90	87	292	298	299	88	89	121	122	124	122	90
30	91	128	296	301	---	88	88	120	125	125	125	91
31	91	---	296	289	---	91	---	134	---	125	124	---
TOTAL	3339	2805	8129	8862	8607	4511	2918	3381	3700	3842	3581	3258
MEAN	108	93.5	262	286	297	146	97.3	109	123	124	116	109
MAX	194	128	296	301	301	301	125	134	128	129	129	126
MIN	88	62	87	124	289	35	86	87	116	121	10	90
AC-FT	6620	5560	16120	17580	17070	8950	5790	6710	7340	7620	7100	6460

CAL YR 1987 TOTAL 51522 MEAN 141 MAX 308 MIN 17 AC-FT 102200
WTR YR 1988 TOTAL 56933 MEAN 156 MAX 301 MIN 10 AC-FT 112900

11471500 EEL RIVER AT VAN ARSDALE DAM, NEAR POTTER VALLEY, CA

LOCATION.--Lat 39°23'19", long 123°06'54", in NE 1/4 sec.30, T.18 N., R.11 W, Mendocino County, Hydrologic Unit 18010103, on left bank, 1,000 ft downstream from Van Arsdale Dam, and 4.6 mi north of town of Potter Valley.

DRAINAGE AREA.--349 mi^2.

PERIOD OF RECORD.--November 1909 to September 1922 (combined monthly discharge only, of Eel River at this station and Snow Mountain Water and Power Co.'s tailrace near Potter Valley), October 1922 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1929, published as South Eel River at Van Arsdale Dam, near Potter Valley.

REVISED RECORDS.--WSP 1315-B: 1913, 1920-23, 1925-27. WSP 1395: 1923(M), 1938.

GAGE.--Flow determined by geomation system. Prior to April 1, 1988, water-stage recorder. Elevation of gage is 1,400 ft above National Geodetic Vertical Datum of 1929, from topographic map. Nov. 18, 1909, to Mar. 3, 1927, recorder in reservoir 800 ft upstream from Van Arsdale Dam at different datum. Oct. 1, 1927, to Feb. 28, 1937, nonrecording gage at present site and datum.

REMARKS.--Flow regulated by Lake Pillsbury (station 11470000) 11 mi upstream. Water is diverted from Van Arsdale Reservoir through tunnel to Potter Valley powerhouse (station 11471000) after which part is used for irrigation and remainder flows into East Fork Russian River. Records given herein show only flow passing down Eel River.

COOPERATION.--Records collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission project.

AVERAGE DISCHARGE (combined flow of Eel River at Van Arsdale Dam and Potter Valley powerhouse tailrace).--79 years (water years 1910-88), 662 ft^3/s, 479,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 64,100 ft^3/s, Dec. 22, 1964, gage height, 33.9 ft from floodmarks; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,610 ft^3/s, Jan. 4, gage height, 15.19 ft; minimum daily, 4.7 ft^3/s, June 1.

EXTREMES FOR 1987 WATER YEAR (NOT PREVIOUSLY PUBLISHED).--Maximum discharge, 9,710 ft^3/s, Mar. 13, gage height, 16.22 ft; minimum daily, 5.9 ft^3/s, Oct. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES (NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.3	23	26	278	97	108	172	45	20	9.6	10	11
2	8.7	21	92	143	222	112	153	29	9.4	9.6	10	12
3	7.6	23	235	241	85	137	137	34	9.3	9.6	10	12
4	7.3	19	225	113	73	233	124	32	12	9.7	9.7	11
5	7.5	17	130	123	53	1860	120	32	16	9.7	9.7	10
6	7.7	15	157	108	51	2780	114	30	17	9.7	9.7	10
7	7.4	17	230	102	48	1520	99	29	15	9.6	9.9	11
8	7.1	20	167	100	47	981	106	29	15	9.4	10	11
9	7.0	18	16	101	52	708	84	29	15	9.3	10	11
10	6.6	19	13	106	63	588	81	29	15	9.0	10	11
11	6.5	21	15	108	78	836	84	30	15	8.9	11	11
12	6.9	24	13	111	155	4400	77	31	14	8.9	11	12
13	7.0	17	16	110	1100	7290	84	31	12	8.9	11	12
14	6.9	20	14	107	347	4250	86	30	11	8.8	11	12
15	7.1	15	14	108	560	3030	87	31	11	8.7	11	11
16	6.7	25	51	109	156	1960	87	30	11	8.5	11	12
17	7.1	17	67	110	107	1400	86	30	11	8.5	11	12
18	6.9	18	57	110	124	1100	81	31	11	8.8	11	12
19	7.0	19	36	113	217	932	84	32	11	8.9	11	12
20	6.9	20	28	110	290	771	84	30	10	8.9	11	11
21	7.0	24	18	99	248	712	87	29	10	8.9	11	12
22	6.6	18	24	95	197	642	83	29	10	9.0	11	12
23	8.7	22	18	105	151	735	78	30	9.8	9.2	11	12
24	9.7	21	17	174	117	735	69	29	9.9	11	11	12
25	6.9	20	16	125	80	597	66	29	9.7	12	11	12
26	6.5	21	15	96	68	491	66	30	9.6	11	11	12
27	6.9	22	15	112	75	399	65	30	9.7	11	11	12
28	5.9	22	13	164	70	339	62	27	9.9	11	12	12
29	19	19	19	125	---	279	61	26	10	11	12	12
30	25	20	18	110	---	230	67	26	9.6	11	12	13
31	18	---	31	97	---	200	---	27	---	11	12	---
TOTAL	265.4	597	1806	3813	4931	40355	2734	936	358.9	299.1	334.0	348
MEAN	8.56	19.9	58.3	123	176	1302	91.1	30.2	12.0	9.65	10.8	11.6
MAX	25	25	235	278	1100	7290	172	45	20	12	12	13
MIN	5.9	15	13	95	47	108	61	26	9.3	8.5	9.7	10
AC-FT	526	1180	3580	7560	9780	80040	5420	1860	712	593	662	690

CAL YR 1986 TOTAL 343350.8 MEAN 941 MAX 45800 MIN 4.1 AC-FT 681000
WTR YR 1987 TOTAL 56777.4 MEAN 156 MAX 7290 MIN 5.9 AC-FT 112600

11471500 EEL RIVER AT VAN ARSDALE DAM, NEAR POTTER VALLEY, CA--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	16	272	110	852	109	116	30	4.7	8.5	7.9	7.9
2	12	18	830	124	654	107	109	45	6.0	8.5	8.0	7.7
3	11	20	184	929	501	110	105	98	6.4	8.4	8.0	7.7
4	11	18	154	6380	402	110	101	78	6.4	8.4	8.1	7.5
5	11	16	148	4170	330	109	98	77	6.4	8.6	7.9	7.3
6	11	16	693	2060	266	112	94	81	6.4	8.4	7.7	7.4
7	11	17	337	1340	222	109	91	115	5.8	8.5	8.3	7.3
8	12	18	612	1330	188	110	92	112	5.0	8.2	8.3	7.3
9	13	18	1000	2010	170	107	89	86	5.0	8.4	8.3	7.5
10	13	18	5610	2660	160	110	86	78	5.0	8.3	7.4	7.5
11	13	16	4370	4060	150	110	84	77	5.1	8.1	7.5	7.4
12	12	19	2190	2780	144	109	85	79	5.1	8.0	7.3	7.9
13	14	26	1250	1880	137	110	84	84	5.0	8.2	8.4	8.3
14	15	25	771	1490	126	110	68	82	5.0	8.1	8.3	8.5
15	16	26	511	2610	114	114	35	66	6.6	7.9	8.0	8.7
16	15	26	379	2830	107	110	23	45	8.4	7.9	8.3	8.9
17	15	30	281	2510	111	110	29	16	8.9	7.9	8.1	9.0
18	15	24	188	1830	111	110	29	13	8.5	7.8	7.6	8.7
19	14	23	163	1220	112	109	24	10	8.7	7.7	7.5	8.8
20	16	21	171	909	112	110	39	10	8.7	7.3	7.0	8.6
21	16	21	167	702	109	110	44	9.6	9.6	7.4	7.0	8.4
22	26	21	168	614	109	112	33	9.7	11	7.5	6.0	8.6
23	35	21	153	592	110	110	39	9.7	12	7.4	5.7	8.6
24	29	21	138	642	112	110	40	12	11	7.5	6.5	8.3
25	15	21	133	671	107	110	30	11	8.7	7.5	7.8	8.3
26	17	21	128	630	110	110	31	9.8	9.3	7.2	7.9	8.4
27	19	20	140	582	107	105	30	7.6	9.0	7.2	7.6	8.5
28	18	20	146	551	112	103	29	8.2	9.1	7.6	7.5	8.2
29	15	20	156	923	112	102	29	6.2	8.4	8.2	7.4	8.3
30	16	30	130	1400	---	110	30	5.3	8.5	7.8	7.5	8.4
31	16	---	116	1120	---	114	---	4.8	---	7.5	7.7	---
TOTAL	484	627	21689	51679	5957	3391	1816	1375.9	223.7	245.9	236.5	243.9
MEAN	15.6	20.9	700	1667	205	109	60.5	44.4	7.46	7.93	7.63	8.13
MAX	35	30	5610	6380	852	114	116	115	12	8.6	8.4	9.0
MIN	11	16	116	110	107	102	23	4.8	4.7	7.2	5.7	7.3
AC-FT	960	1240	43020	102500	11820	6730	3600	2730	444	488	469	484

CAL YR 1987 TOTAL 76909.0 MEAN 211 MAX 7290 MIN 8.5 AC-FT 152500
WTR YR 1988 TOTAL 87968.9 MEAN 240 MAX 6380 MIN 4.7 AC-FT 174500

11472150 EEL RIVER NEAR DOS RIOS, CA

LOCATION.--Lat 39°37'30", long 123°20'25", in SW 1/4 SW 1/4 sec.32, T.21 N., R.13 W., Mendocino County, Hydrologic Unit 18010103, on left bank 1,100 ft upstream from Outlet Creek and 6.3 mi south of Dos Rios.

DRAINAGE AREA.--528 mi^2.

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,001.28 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good except discharges below 9.0 ft^3/s, which are fair. Flow partly regulated by Lake Pillsbury (station 11470000) 40 mi upstream and by diversion through Potter Valley powerplant (station 11471000).

AVERAGE DISCHARGE.--22 years, 959 ft^3/s, 694,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 70,100 ft^3/s, Feb. 17, 1986, gage height, 35.54 ft, from rating curve extended above 26,000 ft^3/s on basis of slope-area measurement at gage height 33.64 ft; no flow for many days in 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 45.52 ft, from information by local resident, discharge, 100,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,700 ft^3/s, Dec. 10, gage height, 11.85 ft; minimum daily, 3.8 ft^3/s, Aug. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	16	1980	395	1300	235	171	99	57	23	6.8	5.1
2	9.6	15	4880	405	1090	235	171	95	57	23	7.5	4.7
3	10	14	2150	2460	925	215	169	108	53	23	7.5	5.2
4	9.6	14	2400	7300	804	210	167	154	53	21	7.2	4.9
5	9.0	14	1580	4790	689	203	163	150	66	21	7.4	4.8
6	8.9	15	4360	2850	595	198	159	158	69	21	7.5	4.8
7	8.7	14	2470	2090	522	195	155	210	75	21	6.9	4.6
8	8.7	15	2940	2180	461	195	153	311	73	19	6.6	4.5
9	8.7	22	3900	3210	414	195	152	234	66	18	6.4	4.5
10	8.7	22	7710	3650	388	195	148	191	62	16	6.1	4.7
11	9.1	20	5010	5020	366	193	144	176	55	14	5.7	4.8
12	9.6	17	2710	3680	345	190	143	171	50	14	5.7	4.9
13	9.6	46	1750	2730	328	189	141	166	48	15	5.9	4.9
14	9.6	56	1180	2460	308	187	140	163	45	15	6.6	4.7
15	9.6	36	870	4310	287	186	124	161	43	15	7.1	5.5
16	9.0	27	690	4530	270	182	89	150	42	14	8.4	6.0
17	9.8	57	563	3630	255	180	78	133	41	13	7.3	6.6
18	11	87	423	2720	244	180	75	101	39	12	6.2	7.8
19	11	52	329	2080	237	180	126	89	38	11	7.6	7.8
20	11	52	300	1650	230	178	194	82	35	9.4	6.9	8.1
21	11	110	301	1370	226	177	160	77	34	9.1	6.8	7.7
22	11	78	350	1180	223	177	151	73	32	9.5	6.3	7.9
23	18	50	312	1090	220	177	192	68	32	9.1	6.2	7.5
24	31	37	274	1070	215	177	152	66	29	9.0	5.3	7.1
25	30	33	252	1070	211	177	134	66	27	9.0	4.9	8.1
26	29	29	239	1020	209	177	115	64	28	9.0	4.1	8.1
27	17	26	228	964	208	174	108	61	27	9.0	3.8	8.1
28	24	25	418	909	222	171	103	60	25	8.7	5.6	8.1
29	35	24	708	1340	220	171	101	65	23	7.8	6.0	8.1
30	24	162	579	1870	---	171	101	60	23	7.5	5.8	8.1
31	18	---	467	1570	---	171	---	54	---	6.9	5.7	---
TOTAL	438.8	1185	52323	75593	12012	5841	4179	3816	1347	433.0	197.8	187.7
MEAN	14.2	39.5	1688	2438	414	188	139	123	44.9	14.0	6.38	6.26
MAX	35	162	7710	7300	1300	235	194	311	75	23	8.4	8.1
MIN	8.7	14	228	395	208	171	75	54	23	6.9	3.8	4.5
AC-FT	870	2350	103800	149900	23830	11590	8290	7570	2670	859	392	372

CAL YR 1987 TOTAL 176583.6 MEAN 484 MAX 8660 MIN 8.7 AC-FT 350300
WTR YR 1988 TOTAL 157553.3 MEAN 430 MAX 7710 MIN 3.8 AC-FT 312500

11472200 OUTLET CREEK NEAR LONGVALE, CA

LOCATION.--Lat 39°37'05", long 123°21'20", in NE 1/4 sec.1, T.20 N., R.14 W., Mendocino County, Hydrologic Unit 18010103, on right bank 0.2 mi downstream from Bloody Run Creek, 0.9 mi upstream from mouth, and 6.9 mi northeast of Longvale.

DRAINAGE AREA.--161 mi^2.

PERIOD OF RECORD.--October 1956 to current year.

REVISED RECORDS.--WSP 1929: 1958(M), 1960(M), 1963(M).

GAGE.--Water-stage recorder. Datum of gage is 1,018.14 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Jan. 5-11. Records good except for discharges below 2.0 ft^3/s, which are fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--32 years, 419 ft^3/s, 303,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 77,900 ft^3/s, Dec. 22, 1964, gage height, 30.6 ft, from floodmarks, from rating curve extended above 17,000 ft^3/s on basis of slope-area measurement of peak flow; no flow at times in 1959, 1967, 1977, 1981, 1987, and 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 6	0845	*8,230	*11.04	Dec. 10	0730	7,940	10.85

No flow July 28 to Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.09	2.4	2170	264	283	72	22	30	13	1.7		
2	.12	1.9	4170	337	236	76	22	27	17	1.6		
3	.13	1.7	1730	2470	204	62	21	24	17	1.6		
4	.12	1.5	2400	3130	183	56	21	21	14	1.4		
5	.10	1.5	1190	2150	166	53	21	20	14	1.3		
6	.09	1.5	3640	1500	152	50	21	20	13	1.3		
7	.09	1.9	2040	1080	138	47	20	43	17	1.2		
8	.11	2.5	2500	1200	134	45	19	69	24	1.2		
9	.12	5.0	3250	1450	123	43	18	50	26	1.0		
10	.12	6.7	4900	2100	112	40	18	38	25	.90		
11	.14	6.3	2060	2600	110	39	17	31	25	.81		
12	.17	5.2	1130	2290	95	38	17	26	18	.73		
13	.22	14	602	1500	91	36	16	30	15	.70		
14	.34	22	374	1110	85	36	17	31	12	.56		
15	.42	14	295	1840	79	35	17	24	11	.58		
16	.39	9.4	256	2230	76	35	17	23	9.3	.55		
17	.43	21	222	2390	73	33	18	29	8.3	.56		
18	.39	50	182	1370	66	31	17	27	7.8	.64		
19	.42	24	145	869	62	30	43	22	7.2	.55		
20	.39	23	119	575	60	30	113	18	6.7	.42		
21	.43	89	138	432	57	29	73	17	5.5	.30		
22	.54	53	199	358	56	29	62	14	4.7	.21		
23	1.2	25	159	294	55	30	126	13	4.0	.16		
24	3.5	16	126	257	52	33	68	12	3.6	.11		
25	3.4	16	107	227	49	31	47	11	3.2	.09		
26	2.2	11	95	205	49	28	38	10	3.0	.06		
27	2.1	8.4	89	186	49	27	33	9.4	2.7	.02		
28	4.5	7.6	261	166	53	26	29	9.0	2.4	0		
29	4.7	6.1	527	487	60	24	30	9.7	2.1	0		
30	3.5	207	437	599	---	23	34	12	1.9	0		
31	2.9	---	341	364	---	22	---	12	---	0		---
TOTAL	33.37	654.6	35854	36030	3008	1189	1035	732.1	333.4	20.25	0	0
MEAN	1.08	21.8	1157	1162	104	38.4	34.5	23.6	11.1	.65	0	0
MAX	4.7	207	4900	3130	283	76	126	69	26	1.7	0	0
MIN	.09	1.5	89	166	49	22	16	9.0	1.9	0	0	0
AC-FT	66	1300	71120	71470	5970	2360	2050	1450	661	40	0	0

CAL YR 1987 TOTAL 108823.06 MEAN 298 MAX 4900 MIN 0 AC-FT 215900
WTR YR 1988 TOTAL 78889.72 MEAN 216 MAX 4900 MIN 0 AC-FT 156500

11473900 MIDDLE FORK EEL RIVER NEAR DOS RIOS, CA

LOCATION.--Lat 39°42'23", long 123°19'27", in NE 1/4 SE 1/4 sec.5, T.21 N., R.13 W., Mendocino County, Hydrologic Unit 18010104, on right bank 0.6 mi upstream from Eastman Creek, 1.7 mi southeast of Dos Rios, and 1.9 mi upstream from mouth.

DRAINAGE AREA.--745 mi^2.

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 901.58 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 10-23. Records good except those for discharges below 15 ft^3/s and estimated period, which are fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--23 years, 1,654 ft^3/s, 1,198,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 93,100 ft^3/s, Feb. 17, 1986, gage height, 27.41 ft, from rating curve extended above 52,000 ft^3/s; minimum daily, 2.4 ft^3/s, Sept. 1, 1985.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 35,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 10	Unknown	*27,000	Unknown				

Minimum daily, 5.5 ft^3/s Oct. 4, 6-9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	22	2520	578	2120	1110	390	441	302	118	20	11
2	5.7	21	14600	567	1860	1040	382	408	495	100	19	10
3	5.7	20	6010	3550	1650	924	376	385	392	91	18	9.6
4	5.5	20	4770	8990	1500	886	392	366	341	84	18	8.8
5	5.6	20	4030	3600	1390	882	375	357	343	79	18	8.2
6	5.5	20	9600	2100	1310	849	360	365	452	78	17	7.7
7	5.5	19	5880	1700	1240	809	362	478	499	75	17	7.7
8	5.5	21	4820	1850	1180	775	357	650	498	72	16	7.8
9	5.5	27	5990	2840	1220	760	343	590	456	69	16	7.4
10	5.7	32	19000	4060	1250	735	332	550	446	64	15	7.4
11	6.0	34	13000	5910	1250	688	328	518	401	60	14	7.6
12	6.3	30	8000	3580	1270	636	327	485	362	58	14	7.5
13	6.7	46	5000	2730	1250	590	328	548	333	56	14	7.4
14	6.8	131	3300	2990	1200	561	350	509	307	54	14	7.5
15	6.8	102	2400	6260	1170	541	348	468	288	53	16	7.0
16	6.8	72	1900	5800	1140	519	327	455	276	51	32	7.2
17	6.8	81	1500	3760	1070	493	316	557	275	49	27	7.4
18	6.9	168	1300	2690	1000	476	308	499	251	45	22	7.6
19	6.9	134	1100	2150	929	468	444	452	236	42	19	8.0
20	7.1	110	1000	1870	889	470	644	415	219	39	18	8.3
21	7.2	154	1050	1710	880	464	569	384	209	35	17	8.7
22	8.2	137	1200	1670	872	459	536	364	196	32	15	9.0
23	15	112	1050	1700	859	456	613	347	189	31	15	9.4
24	26	94	927	1860	854	477	545	331	182	29	15	9.1
25	23	84	822	1940	829	466	500	311	170	26	14	9.0
26	20	76	765	1960	826	472	464	299	164	27	14	9.4
27	17	72	699	1970	884	482	449	285	159	27	13	10
28	18	67	766	1980	975	464	422	279	152	26	12	11
29	22	63	866	2840	1020	436	426	315	146	24	12	10
30	22	189	755	3410	---	421	467	306	132	23	11	10
31	25	---	661	2540	---	403	---	275	---	21	11	---
TOTAL	326.5	2178	125281	91155	33887	19212	12380	12992	8871	1638	513	256.7
MEAN	10.5	72.6	4041	2940	1169	620	413	419	296	52.8	16.5	8.56
MAX	26	189	19000	8990	2120	1110	644	650	499	118	32	11
MIN	5.5	19	661	567	826	403	308	275	132	21	11	7.0
AC-FT	648	4320	248500	180800	67210	38110	24560	25770	17600	3250	1020	509

CAL YR 1987 TOTAL 421302.6 MEAN 1154 MAX 19000 MIN 5.5 AC-FT 835700
WTR YR 1988 TOTAL 308690.2 MEAN 843 MAX 19000 MIN 5.5 AC-FT 612300

11475000 EEL RIVER AT FORT SEWARD, CA

LOCATION.--Lat 40°13'05", long 123°37'54", in SE 1/4 NE 1/4 sec.8, T.3 S., R.5 E., Humboldt County, Hydrologic Unit 18010105, on right bank at downstream side of bridge, 1.0 mi southeast of Fort Seward, 1.9 mi upstream from Dobbyn Creek, and 11.8 mi northeast of Garberville.

DRAINAGE AREA.--2,107 mi^2.

PERIOD OF RECORD.--September 1955 to current year. Prior to October 1965, published as "at Alderpoint."

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 217.26 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 22, 1964, at site 7.5 mi upstream at datum 46.55 ft higher. Feb. 2 to Sept. 30, 1965, at site 7.7 mi upstream at datum 49.42 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow slightly regulated by Lake Pillsbury (station 11470000) 99 mi upstream, and by diversion through Potter Valley powerplant (station 11471000).

AVERAGE DISCHARGE.--33 years, 4,734 ft^3/s, 3,430,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 561,000 ft^3/s, Dec. 22, 1964, gage height, 82.6 ft, from floodmarks, present site and datum, 87.2 ft, from floodmarks, site and datum then in use, from rating curve extended above 110,000 ft^3/s on basis of slope-area measurement at gage height 72.5 ft; minimum daily, 1.2 ft^3/s, Sept. 13, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 41,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 2	2015	41,900	24.21	Dec. 10	1600	*66,700	*28.66

Minimum daily, 11 ft^3/s, Sept. 14-21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	72	3390	2370	5750	1770	683	882	511	166	38	18
2	20	67	32100	2220	4850	2060	660	802	755	161	37	17
3	20	62	22700	10200	4130	1680	653	734	867	155	35	17
4	20	58	19600	30800	3600	1520	646	697	668	149	34	16
5	20	56	16500	20900	3200	1480	672	724	614	143	32	15
6	20	54	23900	12700	2870	1450	641	727	688	136	31	15
7	20	53	23700	9190	2620	1350	612	853	889	132	30	14
8	20	55	19700	10000	2410	1280	602	1510	911	130	30	13
9	20	62	20600	13900	2300	1230	592	1610	865	124	29	12
10	20	61	49700	16500	2330	1210	570	1270	801	117	29	12
11	20	67	29900	22100	2300	1150	547	1090	757	109	29	12
12	20	74	16000	16500	2260	1090	533	967	663	100	28	12
13	20	99	10100	12500	2230	1030	527	963	581	96	27	12
14	20	124	6790	11800	2130	979	540	1080	524	91	26	11
15	20	228	4940	21300	1990	944	589	921	474	88	26	11
16	20	247	4030	22700	1940	920	567	874	437	85	25	11
17	20	212	3390	18200	1830	878	499	930	412	82	25	11
18	21	258	2860	13000	1700	842	471	992	408	80	24	11
19	21	466	2500	9780	1610	822	520	812	376	79	31	11
20	21	400	2230	7720	1510	815	1320	721	346	75	37	11
21	21	366	2320	6440	1470	815	1440	647	321	71	34	11
22	26	545	3190	5700	1450	806	1240	591	296	64	30	12
23	29	430	3250	5280	1440	808	1370	545	276	58	28	13
24	32	303	2560	5160	1420	824	1380	515	259	54	27	14
25	37	228	2230	5030	1390	833	1130	487	240	51	25	15
26	61	186	2070	4800	1350	803	979	457	223	50	24	16
27	70	168	1950	4590	1360	798	881	438	210	46	23	16
28	69	152	2280	4420	1490	802	827	427	196	44	22	16
29	64	139	3420	5240	1670	770	787	428	182	44	20	16
30	61	219	3200	8900	---	733	848	478	174	42	19	17
31	70	---	2690	6960	---	707	---	452	---	41	18	---
TOTAL	943	5511	343790	346900	66600	33199	23326	24624	14924	2863	873	408
MEAN	30.4	184	11090	11190	2297	1071	778	794	497	92.4	28.2	13.6
MAX	70	545	49700	30800	5750	2060	1440	1610	911	166	38	18
MIN	20	53	1950	2220	1350	707	471	427	174	41	18	11
AC-FT	1870	10930	681900	688100	132100	65850	46270	48840	29600	5680	1730	809

CAL YR 1987 TOTAL 1131003 MEAN 3099 MAX 49700 MIN 19 AC-FT 2243000
WTR YR 1988 TOTAL 863961 MEAN 2361 MAX 49700 MIN 11 AC-FT 1714000

11475560 ELDER CREEK NEAR BRANSCOMB, CA
(Hydrologic benchmark station)

LOCATION.--Lat 39°43'47", long 123°38'34", in NW 1/4 NE 1/4 sec.29, T.22 N., R.16 W., Mendocino County, Hydrologic Unit 18010106, on right bank 0.2 mi upstream from mouth, and 5.3 mi north of Branscomb. Raingage No. 1: Lat 39°43'50", long 123°38'07", in NW 1/4 NW 1/4 sec.28, T.22 N., R.16 W., elevation, 1,440 ft at site 0.5 mi east of gaging station.

DRAINAGE AREA.--6.50 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and one recording and storage-type precipitation gage. Datum of gage is 1,391.08 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 9-22. Records good except those for flows below 1.0 ft^3/s, which are fair. No regulation; small diversion above station for domestic use.

AVERAGE DISCHARGE.--21 years, 26.1 ft^3/s, 18,910 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,280 ft^3/s, Mar. 29, 1974, gage height, 9.77 ft, from rating curve extended above 660 ft^3/s on basis of slope-area measurements at gage heights 9.40 and 11.41 ft; minimum daily, 0.27 ft^3/s, Sept. 10-15, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 11.41 ft, from floodmarks, discharge, 3,660 ft^3/s by slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 10	Unknown	*562	*6.84				

Minimum daily, 0.41 ft^3/s, Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.46	.97	75	21	27	8.0	3.9	3.8	5.1	2.3	.97	.61
2	.46	.97	205	22	25	7.3	3.8	3.6	4.8	2.1	.97	.55
3	.46	.97	119	52	24	7.1	3.8	3.4	4.6	2.0	.97	.57
4	.46	.97	125	105	22	6.7	3.8	3.3	4.8	2.0	.97	.55
5	.46	.97	97	83	21	6.6	3.8	3.3	4.8	2.0	.97	.53
6	.46	.97	130	66	20	6.4	3.6	3.5	4.7	1.9	.97	.53
7	.45	.97	122	58	18	6.3	3.5	5.0	4.9	1.8	.97	.53
8	.41	1.2	127	59	17	6.1	3.4	4.8	5.5	1.7	.97	.53
9	.42	1.6	125	82	17	6.0	3.3	4.4	5.5	1.7	.96	.54
10	.43	1.2	420	102	16	5.9	3.3	4.1	6.0	1.6	.91	.56
11	.46	1.2	310	125	15	5.7	3.3	3.8	5.8	1.6	.91	.50
12	.46	1.2	220	98	14	5.7	3.2	4.1	5.5	1.6	.91	.49
13	.46	4.8	160	80	14	5.5	3.1	4.6	5.3	1.6	.97	.49
14	.46	2.6	115	74	13	5.3	3.1	4.1	5.1	1.6	.97	.49
15	.46	1.6	83	101	12	5.3	3.1	3.9	4.7	1.6	.97	.49
16	.46	1.4	59	120	11	5.1	3.1	4.5	4.4	1.6	.97	.47
17	.46	4.3	42	108	11	5.1	3.1	4.5	4.4	1.5	.97	.46
18	.46	3.6	34	84	10	5.1	3.2	4.1	4.3	1.4	.91	.46
19	.46	2.2	27	68	10	5.0	6.0	3.9	4.0	1.3	.85	.46
20	.49	3.7	21	57	9.9	4.8	4.8	3.7	3.7	1.3	.85	.46
21	.48	4.6	22	49	9.4	4.8	4.2	3.6	3.6	1.2	.85	.46
22	.47	3.0	24	42	8.9	4.8	4.3	3.4	3.4	1.2	.80	.48
23	.86	2.2	21	36	8.7	5.2	5.0	3.5	3.3	1.2	.80	.49
24	.92	1.9	21	32	8.4	4.8	4.2	3.2	3.1	1.2	.80	.49
25	.76	1.6	20	29	7.9	4.6	3.9	3.1	3.0	1.2	.75	.49
26	.70	1.5	19	26	7.7	4.5	3.6	3.1	2.8	1.2	.70	.49
27	.70	1.4	18	24	7.6	4.4	3.4	3.0	2.6	1.1	.68	.51
28	.90	1.4	22	23	8.1	4.3	3.3	3.3	2.6	1.1	.69	.53
29	.97	1.4	23	31	7.6	4.3	3.9	3.5	2.4	1.0	.65	.53
30	.97	5.5	22	31	---	4.3	3.9	3.1	2.4	1.0	.65	.52
31	.97	---	21	28	---	4.1	---	3.0	---	.97	.65	---
TOTAL	17.80	61.89	2849	1916	401.2	169.1	111.9	116.2	127.1	46.57	26.93	15.26
MEAN	.57	2.06	91.9	61.8	13.8	5.45	3.73	3.75	4.24	1.50	.87	.51
MAX	.97	5.5	420	125	27	8.0	6.0	5.0	6.0	2.3	.97	.61
MIN	.41	.97	18	21	7.6	4.1	3.1	3.0	2.4	.97	.65	.46
AC-FT	35	123	5650	3800	796	335	222	230	252	92	53	30
a	1.34	7.54	16.31	13.37	0.43	0.78	2.60	2.86	4.62	0.00	0.00	0.00

CAL YR 1987	TOTAL	7774.18	MEAN	21.3	MAX	420	MIN	.41	AC-FT	15420
WTR YR 1988	TOTAL	5858.95	MEAN	16.0	MAX	420	MIN	.41	AC-FT	11620

a Precipitation, in inches, at raingage No. 1.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968 to current year.
CHEMICAL DATA: Water years 1968 to current year.
WATER TEMPERATURE: Water years 1968-79.
SEDIMENT DATA: Water years 1969 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1967 to September 1979.
SUSPENDED-SEDIMENT DISCHARGE: October 1973 to September 1975.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (FTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
DEC											
23...	1145	21	100	7.90	6.0	0.30	730	11.8	99	K15	44
MAR											
23...	1245	5.3	125	8.20	8.5	0.30	730	11.2	100	K9	K8
JUN											
16...	1145	4.4	127	8.20	13.5	0.40	725	10.1	102	K4	36
SEP											
15...	1035	0.49	156	8.10	11.5	0.70	725	9.7	94	K6	K18

DATE	HARDNESS TOTAL (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3
DEC											
23...	38	0	9.8	3.2	5.7	24	0.4	0.70	58	47	48
MAR											
23...	49	0	13	4.0	6.9	23	0.4	0.70	68	56	56
JUN											
16...	50	0	13	4.2	7.2	24	0.5	0.60	73	60	61
SEP											
15...	62	0	16	5.2	8.7	23	0.5	0.70	90	74	74

DATE	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
DEC											
23...	3.2	3.3	0.20	15	68	70	0.09	<0.010	<0.100	<0.010	<0.010
MAR											
23...	3.9	2.0	0.10	14	74	78	0.10	<0.010	<0.100	<0.010	0.020
JUN											
16...	3.2	2.2	0.10	14	80	81	0.11	<0.010	<0.100	<0.010	0.040
SEP											
15...	3.9	3.0	0.10	15	85	97	0.12	<0.010	<0.100	<0.010	<0.010

DATE	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)
DEC											
23...	0.30	0.010	<0.010	0.020	<10	<1	10	<0.5	<1	<1	<3
MAR											
23...	<0.20	0.020	0.020	--	10	<1	13	<0.5	<1	<1	<3
JUN											
16...	<0.20	0.020	0.020	0.020	<10	1	20	<0.5	<1	<1	<3
SEP											
15...	<0.20	0.020	0.030	0.020	<10	<1	27	<0.5	<1	<1	<3

See footnotes at end of table.

11475560 ELDER CREEK NEAR BRANSCOMB, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)
DEC										
23...	<1	6	<5	<4	<1	<0.1	<10	1	<1	<1.0
MAR										
23...	1	5	<5	<4	2	<0.1	<10	2	<1	1.0
JUN										
16...	<1	<3	<5	<4	2	<0.1	<10	1	<1	1.0
SEP										
15...	1	4	<5	<4	1	<0.1	<10	<1	<1	<1.0

DATE	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS-SOLVED (UG/L AS U)
DEC											
23...	95	<6	4	--	--	--	--	--	--	--	--
MAR											
23...	120	<6	14	<0.4	<0.4	0.7	<0.4	0.6	<0.4	0.03	<0.01
JUN											
16...	130	<6	<3	--	--	--	--	--	--	--	--
SEP											
15...	160	<6	8	<0.4	<0.4	0.8	<0.4	0.7	<0.4	--	0.20

K Results based on colony count outside the acceptable range (non-ideal colony count).
< Actual value is known to be less than the value shown.

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	SAMPLE LOC-ATION, CROSS SECTION (FT FM L BANK)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	SEDI-MENT, SUS-PENDED (MG/L)
MAR									
23...*	1045	5.30	125	8.20	8.5	730	11.2	100	0
23...*	1100	9.30	125	8.20	8.5	730	11.2	100	1
23...*	1120	13.5	124	8.20	8.5	730	10.1	90	1
SEP									
15...*	0940	1.30	155	8.10	11.5	725	10.2	98	5
15...*	0950	4.80	155	8.10	11.5	725	9.7	94	5
15...*	1010	7.80	155	8.10	11.5	725	10.0	96	5

* Instantaneous streamflow at the time of cross-sectional measurement: Mar. 23, 5.3 ft^3/s; Sept. 15, 0.49 ft^3/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
DEC					
23...	1145	21	6.0	2	0.11
MAR					
23...	1055	5.3	8.5	1	0.01
JUN					
16...	1145	4.4	13.5	2	0.02
SEP					
15...	0945	0.49	11.5	5	0.01

11475800 SOUTH FORK EEL RIVER AT LEGGETT, CA

LOCATION.--Lat 39°52'29", long 123°43'10", in NE 1/4 SE 1/4 sec.3, T.23 N., R.17 W., Mendocino County, Hydrologic Unit 18010106, on right bank near Standish Hickey State Park, 0.2 mi upstream from Rock Creek, and 0.7 mi northwest of Leggett.

DRAINAGE AREA.--248 mi^2.

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 691.32 ft above National Geodetic Vertical Datum of 1929. Prior to July 29, 1986, at datum 2.00 ft higher.

REMARKS.--No estimated daily discharges. Records good except flows above 3,000 ft^3/s, which are fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--23 years, 904 ft^3/s, 654,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 72,700 ft^3/s, Jan. 4, 1966, gage height, 25.4 ft, from floodmarks, at datum 2.00 ft higher, from rating curve extended above 21,000 ft^3/s on basis of slope-area measurement at gage height 26.13 ft; minimum daily, 7.3 ft^3/s, Aug. 4-6, 12, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 26.13 ft, from floodmarks, at datum 2.00 ft higher, discharge, 78,700 ft^3/s, by slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 2	1345	14,200	12.94	Dec. 10	0900	*20,400	*15.17

Minimum daily, 12 ft^3/s, Sept. 6-20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	19	2560	680	782	232	99	116	151	39	17	14
2	13	20	10100	667	725	224	97	107	184	38	17	13
3	13	20	3080	2380	668	201	99	98	153	38	17	13
4	13	19	4340	4480	610	194	103	94	144	37	17	13
5	13	19	2600	2310	545	191	99	93	152	36	18	13
6	13	19	5370	1630	525	184	94	96	143	35	18	12
7	13	19	3410	1450	496	177	91	142	131	33	17	12
8	13	20	3390	1670	468	170	89	176	133	31	17	12
9	13	28	5080	3280	443	163	87	147	136	29	17	12
10	13	29	13100	3500	419	157	85	129	136	28	16	12
11	13	29	4280	4680	398	154	84	111	125	28	16	12
12	13	29	2340	2730	381	150	81	105	108	27	16	12
13	13	137	1680	2110	363	147	80	121	100	25	17	12
14	13	124	1320	2050	347	143	80	111	92	25	17	12
15	14	63	1100	4600	332	140	81	101	86	25	17	12
16	15	50	944	4660	319	137	81	111	80	25	17	12
17	15	91	806	3220	305	136	80	132	78	24	17	12
18	15	148	706	2240	286	133	80	118	76	23	17	12
19	15	81	617	1690	274	129	152	106	71	22	17	12
20	15	122	543	1400	263	124	202	97	67	22	16	12
21	15	208	576	1210	256	121	146	90	62	20	16	13
22	15	122	667	1050	248	121	142	83	60	19	15	13
23	17	77	548	938	236	134	169	79	57	19	15	13
24	19	61	480	850	236	134	149	77	53	19	15	13
25	20	54	443	776	227	121	126	73	50	19	15	13
26	20	49	415	721	220	117	110	68	48	19	14	13
27	20	46	396	666	214	108	101	68	44	18	14	13
28	19	44	665	646	220	107	96	71	42	18	14	14
29	19	41	969	972	218	105	113	81	40	18	14	13
30	19	235	799	1070	---	103	125	81	40	17	14	13
31	19	---	751	858	---	101	---	74	---	17	14	---
TOTAL	473	2023	74075	61184	11024	4558	3221	3156	2842	793	498	377
MEAN	15.3	67.4	2390	1974	380	147	107	102	94.7	25.6	16.1	12.6
MAX	20	235	13100	4680	782	232	202	176	184	39	18	14
MIN	13	19	396	646	214	101	80	68	40	17	14	12
AC-FT	938	4010	146900	121400	21870	9040	6390	6260	5640	1570	988	748

CAL YR 1987 TOTAL 220318 MEAN 604 MAX 13100 MIN 11 AC-FT 437000
WTR YR 1988 TOTAL 164224 MEAN 449 MAX 13100 MIN 12 AC-FT 325700

11476500 SOUTH FORK EEL RIVER NEAR MIRANDA, CA

LOCATION.--Lat 40°10'55", long 123°46'30", in NW 1/4 sec.30, T.3 S., R.4 E., Humboldt County, Hydrologic Unit 18010106, on right bank 0.5 mi upstream from Rocky Glen Creek, 4.3 mi southeast of Miranda, and 20 mi upstream from mouth.

DRAINAGE AREA.--537 mi^2.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.-- WSP 1395: Drainage area. WSP 2129: 1955.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 217.57 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 2, 1940, nonrecording gage at site 200 ft upstream at datum 0.8 ft higher. Nov. 2, 1940, to Oct. 31, 1944, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharge. Records good. Occasional storage and release for recreation use during summer months at Benbow Dam, 16 mi upstream. No diversion above station.

AVERAGE DISCHARGE.--49 years, 1,938 ft^3/s, 1,404,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 199,000 ft^3/s, Dec. 22, 1964, gage height, 46.0 ft, from floodmarks, from rating curve extended above 53,000 ft^3/s on basis of slope-area measurement at gage height 42.7 ft; minimum observed, 9 ft^3/s, Oct. 17, 1944.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 15,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 2	1615	32,600	19.68	Dec. 10	1230	*42,700	*22.24
Dec. 6	1730	20,000	16.04	Jan. 11	0700	15,600	14.51

Minimum daily, 20 ft^3/s, Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	39	4540	1620	1640	494	202	262	360	96	35	23
2	24	42	23600	1530	1500	469	200	232	673	95	35	23
3	23	43	11200	5280	1380	425	198	214	525	94	35	23
4	23	40	12300	10800	1280	400	207	199	480	93	35	22
5	23	38	8630	6720	1210	394	204	202	556	90	35	22
6	23	36	13900	4430	1140	383	193	203	580	77	36	21
7	22	36	10400	3800	1080	367	183	277	455	78	36	21
8	22	39	10400	4920	1030	354	177	347	396	80	36	22
9	23	55	12300	7920	981	345	175	334	380	77	36	21
10	23	57	32400	9340	935	327	172	283	344	76	36	21
11	23	57	13800	12300	887	315	167	247	335	74	35	20
12	24	56	7250	8100	843	311	161	230	291	72	35	21
13	24	103	4710	5860	794	302	159	266	260	54	35	21
14	25	262	3450	5480	752	295	161	258	229	64	34	21
15	26	184	2770	11000	712	288	162	230	218	64	34	22
16	26	123	2310	11700	676	282	162	252	206	70	34	112
17	25	148	1880	8970	645	272	160	342	201	66	35	134
18	25	242	1580	6180	608	267	155	302	168	61	36	60
19	25	214	1370	4510	580	261	276	252	175	40	35	24
20	25	213	1220	3540	557	253	432	218	174	51	28	22
21	25	434	1290	2940	531	248	384	209	160	53	23	21
22	26	319	1580	2480	515	247	316	194	117	49	22	21
23	31	205	1390	2130	499	269	371	173	145	47	23	21
24	32	155	1180	1880	481	276	341	127	127	46	28	22
25	35	127	1080	1680	467	254	288	122	107	45	29	22
26	36	109	1000	1530	453	238	247	121	119	43	27	23
27	36	98	965	1410	441	227	223	123	114	43	27	23
28	36	94	1560	1350	437	220	204	113	111	41	27	23
29	37	86	2520	1830	439	213	224	122	107	36	25	23
30	38	354	2080	2460	---	208	271	161	88	35	25	24
31	37	---	1830	1860	---	206	---	165	---	36	24	---
TOTAL	847	4008	196485	155550	23493	9410	6775	6780	8201	1946	976	899
MEAN	27.3	134	6338	5018	810	304	226	219	273	62.8	31.5	30.0
MAX	38	434	32400	12300	1640	494	432	347	673	96	36	134
MIN	22	36	965	1350	437	206	155	113	88	35	22	20
AC-FT	1680	7950	389700	308500	46600	18660	13440	13450	16270	3860	1940	1780

CAL YR 1987 TOTAL 549699 MEAN 1506 MAX 32400 MIN 22 AC-FT 1090000

WTR YR 1988 TOTAL 415370 MEAN 1135 MAX 32400 MIN 20 AC-FT 823900

11476600 BULL CREEK NEAR WEOTT, CA

LOCATION.--Lat 40°21'05", long 124°00'10", in SW 1/4 NW 1/4 sec.30, T.1 S., R.2 E., Humboldt County, Hydrologic Unit 18010106, on left bank 0.2 mi downstream from Albee Creek, 4.5 mi northwest of Weott, and 4.6 mi upstream from mouth.

DRAINAGE AREA.--28.1 mi^2.

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 269.36 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 22, 1964, water-stage recorder, and Jan. 14 to Aug. 10, 1965, nonrecording gage at site 150 ft downstream at datum 8.90 ft lower.

REMARKS.--Estimated daily discharges: Dec. 2, 3. Records good. Minor diversions above station for domestic and recreational use.

AVERAGE DISCHARGE.--28 years, 127 ft^3/s, 92,010 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,520 ft^3/s, Dec. 22, 1964, gage height, 20.6 ft, from floodmarks, site and datum then in use, from rating curve extended above 2,100 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 0.30 ft^3/s, Sept. 28, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 6	0530	*2,310	*7.90				

Minimum daily, 0.34 ft^3/s, Sept. 14, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.58	1.1	181	171	99	28	9.4	13	52	7.7	2.1	.68
2	.56	1.1	900	161	90	24	9.2	11	31	7.4	2.1	.59
3	.58	1.2	680	253	82	23	10	11	31	7.3	2.0	.52
4	.62	1.1	740	355	77	22	9.8	10	29	7.2	1.9	.50
5	.59	1.0	361	301	72	23	9.1	10	41	6.9	2.0	.49
6	.53	1.0	1110	259	69	21	8.8	11	36	6.6	2.1	.45
7	.51	1.0	620	268	65	20	8.6	14	31	6.4	2.0	.45
8	.51	1.4	590	330	62	19	8.5	13	28	6.0	1.9	.49
9	.56	3.2	558	420	58	19	8.2	12	27	5.7	1.8	.45
10	.61	2.0	1020	515	56	18	7.9	10	24	5.5	1.6	.49
11	.67	1.7	596	553	53	17	7.6	9.4	21	5.4	1.6	.49
12	.69	1.6	400	442	51	17	7.4	12	19	5.4	1.6	.42
13	.72	10	292	369	48	16	7.4	14	18	5.2	1.9	.35
14	.69	4.9	228	391	46	16	7.4	11	16	5.2	1.9	.34
15	.69	2.6	251	511	44	15	7.4	10	15	5.0	1.8	.34
16	.66	2.9	233	608	42	15	7.4	14	15	4.7	1.8	.36
17	.65	11	198	479	41	14	7.4	12	14	4.5	1.7	.44
18	.67	6.8	173	389	38	13	7.3	11	13	4.2	1.5	.47
19	.64	3.6	154	318	37	13	29	10	12	3.9	1.4	.50
20	.64	17	139	262	35	13	20	9.4	12	3.5	1.3	.62
21	.62	18	138	222	34	13	15	8.7	11	3.2	1.2	.64
22	.69	8.5	142	189	33	12	17	8.3	11	3.1	1.1	.58
23	.97	5.8	134	165	32	14	18	8.3	10	3.1	1.1	.53
24	1.1	4.5	122	147	30	13	14	8.1	9.5	2.9	1.1	.52
25	.97	4.5	113	132	29	12	13	7.6	9.1	2.7	1.0	.48
26	.90	3.5	105	121	28	12	11	7.4	8.9	2.7	.93	.51
27	.90	3.1	110	110	27	11	11	7.3	8.7	2.9	.93	.53
28	.90	3.0	186	103	26	11	10	8.7	8.5	2.6	.84	.56
29	.90	2.7	217	130	26	11	16	10	8.2	2.4	.77	.57
30	.99	32	206	114	---	10	14	8.2	8.0	2.3	.73	.52
31	1.1	---	190	106	---	9.8	---	8.1	---	2.3	.72	---
TOTAL	22.41	161.8	11087	8894	1430	494.8	336.8	318.5	577.9	143.9	46.42	14.88
MEAN	.72	5.39	358	287	49.3	16.0	11.2	10.3	19.3	4.64	1.50	.50
MAX	1.1	32	1110	608	99	28	29	14	52	7.7	2.1	.68
MIN	.51	1.0	105	103	26	9.8	7.3	7.3	8.0	2.3	.72	.34
AC-FT	44	321	21990	17640	2840	981	668	632	1150	285	92	30

CAL YR 1987 TOTAL 34974.77 MEAN 95.8 MAX 1110 MIN .51 AC-FT 69370
WTR YR 1988 TOTAL 23528.41 MEAN 64.3 MAX 1110 MIN .34 AC-FT 46670

11477000 EEL RIVER AT SCOTIA, CA
(National stream-quality accounting network station)

LOCATION.--Lat 40°29'30", long 124°05'55", in SW 1/4 sec.5, T.1 N., R.1 E., Humboldt County, Hydrologic Unit 18010105, near center of span in left pier of A.S. Murphy Memorial Bridge on State Highway 283, 0.5 mi north of Scotia, and 6 mi upstream from Van Duzen River.

DRAINAGE AREA.--3,113 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1910 to current year. Monthly discharge only for some periods and yearly estimates for 1915-16, published in WSP 1315-B.

REVISED RECORDS.--WSP 931: 1938. WSP 1315-B: 1914-15(M), 1917(M), 1927-28(M), 1936(M), 1939(M). WSP 1345: Drainage area. WSP 1715: 1959.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 35.50 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 12, 1940, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Flow slightly regulated by Lake Pillsbury (station 11470000) 138 mi upstream and by diversion through Potter Valley powerplant (station 11471000).

AVERAGE DISCHARGE.--78 years, 7,446 ft^3/s, 5,395,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 752,000 ft^3/s, Dec. 23, 1964, gage height, 72.0 ft, from floodmarks, from rating curve extended above 220,000 ft^3/s on basis of maximum flow at upstream stations; minimum observed, 10 ft^3/s, Aug. 12-14, 1924.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 72,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 2	2330	82,600	26.85	Dec. 10	2130	*118,000	*31.05
Dec. 7	0100	72,200	25.45				

Minimum daily, 44 ft^3/s, Sept. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	131	3280	5770	8370	2640	1120	1510	1120	393	107	64
2	71	132	50300	5270	7270	2830	1090	1440	1730	382	105	62
3	68	132	53500	11100	6420	2690	1070	1320	1950	377	103	61
4	68	132	34900	41900	5760	2380	1070	1200	1860	363	99	59
5	68	129	36300	36700	5260	2320	1070	1170	1930	350	96	58
6	68	121	37900	20800	4860	2250	1070	1200	2010	335	96	56
7	68	118	52300	14600	4500	2170	1020	1290	1990	315	94	56
8	68	118	35900	16000	4220	2070	984	1640	1910	298	91	56
9	68	133	36300	22400	3990	2010	970	2230	1790	284	88	54
10	68	146	85800	29900	3870	1930	947	2030	1680	275	88	54
11	66	147	65900	41100	3810	1870	911	1730	1550	268	88	54
12	66	147	28300	32500	3680	1790	878	1550	1440	258	88	53
13	66	179	17100	22600	3590	1700	860	1530	1280	248	88	51
14	66	223	11800	19800	3470	1620	864	1570	1170	235	91	48
15	66	379	9250	35000	3280	1560	884	1540	1060	216	92	47
16	66	416	7950	42600	3160	1520	933	1450	983	209	91	45
17	66	461	6820	37800	3030	1480	879	1610	914	206	88	44
18	67	517	5910	24700	2870	1420	808	1640	865	201	88	102
19	68	580	5220	18100	2720	1370	956	1540	803	195	88	140
20	68	824	4680	13800	2600	1340	1340	1340	751	188	88	104
21	68	936	4430	11300	2510	1340	2210	1210	704	167	88	76
22	70	1050	5600	9670	2440	1330	2050	1110	648	159	88	63
23	86	1030	6360	8730	2380	1330	2030	1020	579	154	88	56
24	86	791	5340	8200	2340	1350	2160	940	566	151	85	50
25	84	610	4670	7830	2290	1360	1900	848	534	148	78	49
26	87	489	4280	7340	2250	1300	1650	807	493	143	72	49
27	88	416	4080	6960	2190	1260	1460	756	476	138	71	49
28	94	380	4780	6620	2230	1240	1340	755	458	131	71	49
29	118	354	7260	7020	2350	1240	1330	784	433	124	71	51
30	131	455	7380	11400	---	1190	1410	760	412	119	69	52
31	132	---	6500	10400	---	1160	---	815	---	115	67	---
TOTAL	2397	11676	650090	587910	107710	53060	37264	40335	34089	7145	2705	1812
MEAN	77.3	389	20970	18960	3714	1712	1242	1301	1136	230	87.3	60.4
MAX	132	1050	85800	42600	8370	2830	2210	2230	2010	393	107	140
MIN	66	118	3280	5270	2190	1160	808	755	412	115	67	44
AC-FT	4750	23160	1289000	1166000	213600	105200	73910	80000	67620	14170	5370	3590

CAL YR 1987 TOTAL 2136620 MEAN 5854 MAX 85800 MIN 66 AC-FT 4238000
WTR YR 1988 TOTAL 1536193 MEAN 4197 MAX 85800 MIN 44 AC-FT 3047000

11477000 EEL RIVER AT SCOTIA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952 to current year.
CHEMICAL DATA: Water years 1952-75, 1977, 1979 to current year.
BIOLOGICAL DATA: Water year 1979-81.
SPECIFIC CONDUCTANCE: Water years 1979-81.
WATER TEMPERATURE: Water years 1958-82.
SEDIMENT DATA: Water years 1955 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1979 to September 1981.
WATER TEMPERATURE: October 1957 to June 1982.
SUSPENDED-SEDIMENT DISCHARGE: October 1957 to September 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
NOV												
05...	1045	132	325	8.30	15.0	0.20	760	10.4	103	K10	K4	160
JAN												
20...	1125	14000	137	7.70	7.5	63	770	11.6	96	K13	K57	61
MAR												
03...	1210	2700	183	8.10	12.0	2.7	765	10.8	100	K4	K6	81
MAY												
04...	1100	1210	224	8.40	15.0	0.30	760	10.2	101	K2	K2	100
JUL												
13...	1055	246	272	8.40	21.5	0.20	765	8.3	94	K4	K4	130
SEP												
06...	1130	56	294	8.60	19.0	0.70	760	9.8	106	K4	38	150

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER WH IT FIELD MG/L AS HCO3	CAR-BONATE WATER WH IT FIELD MG/L AS CO3	ALKA-LINITY WAT WH TOT IT FIELD MG/L AS CACO3	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)
NOV												
05...	21	44	12	9.2	11	0.3	1.3	165	2	139	139	25
JAN												
20...	0	16	5.0	4.7	14	0.3	0.70	78	--	64	63	10
MAR												
03...	0	22	6.4	5.4	12	0.3	0.90	100	--	82	81	18
MAY												
04...	0	28	7.7	6.4	12	0.3	1.0	107	12	108	107	24
JUL												
13...	8	36	9.8	8.2	12	0.3	1.3	124	--	122	122	19
SEP												
06...	21	39	12	9.9	13	0.4	1.3	146	2	124	127	22

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)
NOV												
05...	7.2	0.10	11	194	194	0.26	<0.010	<0.100	0.020	0.020	<0.20	<0.010
JAN												
20...	2.8	0.20	12	85	90	0.12	<0.010	0.140	<0.010	<0.010	<0.20	0.030
MAR												
03...	2.2	0.20	9.9	108	114	0.15	<0.010	<0.100	<0.010	<0.010	--	0.010
MAY												
04...	3.9	0.10	8.3	125	144	0.17	<0.010	<0.100	<0.010	<0.010	<0.20	0.020
JUL												
13...	4.8	0.10	6.8	155	159	0.21	<0.010	<0.100	<0.010	<0.010	0.30	0.010
SEP												
06...	6.6	0.10	8.8	170	176	0.23	<0.010	<0.100	<0.010	<0.010	0.40	0.010

See footnotes at end of table.

11477000 EEL RIVER AT SCOTIA, CA--Continued

WATER QUALITY RECORDS, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)
NOV											
05...	<0.010	<0.010	<10	1	92	<0.5	<1	<1	<3	1	3
JAN											
20...	0.020	<0.010	20	1	28	<0.5	<1	<1	<3	1	18
MAR											
03...	0.010	<0.010	--	--	--	--	--	--	--	--	--
MAY											
04...	0.020	0.020	10	1	55	<0.5	<1	<1	<3	1	8
JUL											
13...	<0.010	<0.010	--	--	--	--	--	--	--	--	--
SEP											
06...	0.010	<0.010	<10	1	95	<0.5	3	<1	<3	1	9

DATE	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
NOV											
05...	<5	5	6	<0.1	<10	2	<1	<1.0	480	<6	5
JAN											
20...	<5	13	4	<0.1	<10	1	<1	<1.0	180	<6	31
MAR											
03...	--	--	--	--	--	--	--	--	--	--	--
MAY											
04...	<5	<4	4	<0.1	<10	3	<1	<1.0	330	<6	17
JUL											
13...	--	--	--	--	--	--	--	--	--	--	--
SEP											
06...	<5	<4	4	<0.1	<10	<1	<1	1.0	450	<6	9

K Results based on colony count outside the acceptable range (non-ideal colony count).
< Actual value is known to be less than the value shown.

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	SEDIMENT, SUSPENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR										
03...*	1040	45.0	183	7.70	12.0	765	10.8	100	9	93
03...*	1135	79.0	185	8.00	12.0	765	11.0	102	9	92
03...*	1215	128	185	8.10	12.0	765	10.8	100	13	62
03...*	1300	205	184	8.20	12.0	765	10.7	99	8	88
03...*	1340	350	184	8.20	12.0	765	10.8	100	7	95
SEP										
06...*	1020	60.0	302	8.40	18.0	760	9.7	103	19	47
06...*	1035	69.5	302	8.40	18.5	760	9.7	104	15	51
06...*	1045	80.0	303	8.50	18.5	760	9.8	105	10	49
06...*	1100	92.5	301	8.50	18.0	760	9.6	102	11	52
06...*	1110	112	302	8.50	18.0	760	10.5	111	15	57

*Instantaneous streamflow at the time of cross-sectional measurement: Mar. 3, 2,700 ft^3/s; Sept. 6, 56 ft^3/s.

11477000 EEL RIVER AT SCOTIA, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV						
05...	1045	132	15.0	2	0.71	--
JAN						
20...	1125	14000	7.5	222	8390	71
MAR						
03...	1040	2700	12.0	9	66	86
MAY						
04...	1100	1210	15.0	2	6.5	--
JUL						
13...	1055	246	21.5	3	2.0	--
SEP						
06...	1020	56	19.0	13	2.0	51

11478500 VAN DUZEN RIVER NEAR BRIDGEVILLE, CA

LOCATION.--Lat 40°28'50", long 123°53'23", in NE 1/4 SE 1/4 sec.12, T.1 N., R.2 E., Humboldt County, Hydrologic Unit 18010105, on left bank at downstream side of bridge on State Highway 36, 0.9 mi upstream from Grizzly Creek, and 5 mi west of Bridgeville.

DRAINAGE AREA.--222 mi^2.

PERIOD OF RECORD.--October 1950 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 358.18 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1965, at site 2.4 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. No storage or large diversion above station.

AVERAGE DISCHARGE.--38 years, 883 ft^3/s, 639,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,700 ft^3/s, Dec. 22, 1964, gage height, 24.0 ft, from floodmarks, present site and datum, from rating curve extended above 20,000 ft^3/s on basis of slope-area measurement at gage height 21.3 ft, former site and datum; minimum daily, 4.6 ft^3/s, Aug. 8, 13-14, Sept. 9-15, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 15,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 2	1600	15,100	11.81	Dec. 10	0715	*21,300	*13.85
Dec. 6	1200	15,700	12.02				

Minimum daily, 5.5 ft^3/s, Oct. 1, 2, 5, 9, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	11	2290	699	904	269	103	383	951	75	15	8.0
2	5.5	12	10800	671	752	287	99	284	924	72	15	7.9
3	5.8	12	4510	1620	641	241	101	256	681	71	14	7.6
4	5.8	12	7020	3540	557	228	110	230	571	68	14	7.3
5	5.5	11	4730	2370	500	235	102	208	581	64	13	7.1
6	5.6	11	10100	1670	452	243	96	197	591	61	13	7.1
7	5.8	11	5880	1460	414	235	92	288	607	57	13	7.1
8	5.7	11	4920	2010	386	217	89	406	497	55	13	7.1
9	5.5	15	5910	4120	375	207	87	343	419	51	12	7.1
10	5.6	19	14000	4440	375	200	84	286	391	48	12	7.1
11	5.8	19	4510	5490	354	194	81	248	332	46	11	6.8
12	5.7	16	2600	2780	342	185	78	218	291	43	11	6.6
13	5.5	21	1860	2120	338	174	76	352	260	41	11	6.6
14	5.6	43	1490	2660	319	166	79	299	239	40	11	6.6
15	5.8	33	1290	4670	288	160	83	245	217	39	11	6.6
16	5.8	30	1140	4250	280	151	79	292	199	38	11	6.6
17	5.8	50	982	2500	265	146	76	473	187	37	11	6.6
18	5.8	92	868	1750	252	136	73	352	173	34	11	6.6
19	5.8	76	784	1330	239	134	128	268	158	32	10	6.6
20	5.8	68	711	1110	224	129	260	245	147	29	10	6.8
21	5.8	111	922	982	220	128	244	215	135	27	10	6.8
22	6.6	88	1320	914	218	130	263	194	128	25	9.7	6.9
23	11	66	1100	925	214	130	344	178	121	23	9.4	7.1
24	13	53	884	968	211	151	259	168	113	22	9.1	7.0
25	14	53	780	879	205	138	210	156	104	20	8.9	6.8
26	11	50	717	828	200	130	180	146	99	19	8.9	6.8
27	9.8	45	672	800	193	124	162	139	93	19	8.7	6.8
28	9.5	41	832	764	192	120	146	143	87	18	8.1	6.8
29	9.5	37	970	1180	197	116	182	197	82	18	8.0	7.0
30	9.5	95	826	1480	---	112	394	162	79	17	8.0	7.0
31	9.9	---	760	1070	---	108	---	146	---	16	8.0	---
TOTAL	223.3	1212	96178	62050	10107	5324	4360	7717	9457	1225	338.8	208.8
MEAN	7.20	40.4	3103	2002	349	172	145	249	315	39.5	10.9	6.96
MAX	14	111	14000	5490	904	287	394	473	951	75	15	8.0
MIN	5.5	11	672	671	192	108	73	139	79	16	8.0	6.6
AC-FT	443	2400	190800	123100	20050	10560	8650	15310	18760	2430	672	414

CAL YR 1987 TOTAL 275096.6 MEAN 754 MAX 14000 MIN 5.5 AC-FT 545700
WTR YR 1988 TOTAL 198400.9 MEAN 542 MAX 14000 MIN 5.5 AC-FT 393500

11480390 MAD RIVER ABOVE RUTH RESERVOIR, NEAR FOREST GLEN, CA

LOCATION.--Lat 40°17'04", long 123°20'03", in NW 1/4 NE 1/4 sec.24, T.2 S., R.7 E., Trinity County, Hydrologic Unit 18010102, Six Rivers National Forest, near right bank on downstream end of pier of Zenia Road Bridge, 1,600 ft downstream from Marshall Creek, 1.2 mi northwest of Ruth, and 6.1 mi southwest of Forest Glen.

DRAINAGE AREA.--93.8 mi^2.

PERIOD OF RECORD.--September to December 1971, July 1972, June to September 1977, April to May 1980 (discharge measurements only), June 1980 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 2,660 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair except those for discharges below 10 ft^3/s, which are poor. No regulation or diversion above station.

AVERAGE DISCHARGE.--8 years (water years 1981-88), 235 ft^3/s, 170,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft^3/s, Feb. 17, 1986, gage height, 11.39 ft in gage, 12.94 ft from crest-stage gage, from rating curve extended above 5,000 ft^3/s; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater then base discharge of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 10	0815	*7,270	*8.83				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	362	71	320	84	23	46	110	16	3.2	.54
2	.00	.00	1950	74	271	70	22	42	130	15	3.2	.43
3	.00	.00	715	636	232	58	22	40	98	14	3.0	.43
4	.00	.00	1450	1640	203	54	22	37	82	13	3.0	.39
5	.00	.00	786	867	179	53	22	36	88	13	3.0	.48
6	.00	.00	1520	533	162	50	21	39	125	12	2.8	.40
7	.00	.00	1040	442	147	47	21	63	130	14	2.5	.34
8	.00	.00	807	627	135	44	21	112	123	14	2.5	.27
9	.00	.00	1730	1490	124	43	19	108	111	15	2.3	.20
10	.00	.00	4450	1510	114	41	19	87	104	15	2.3	.18
11	.00	.00	1310	1580	107	40	19	71	90	14	2.3	.11
12	.00	.00	646	937	100	39	18	67	80	13	2.3	.10
13	.00	.00	402	772	94	37	18	85	68	12	2.3	.04
14	.00	.00	285	1050	89	36	20	71	59	12	2.4	.04
15	.00	.00	227	1300	85	35	21	61	54	12	1.8	.02
16	.00	.00	188	1150	79	34	20	62	51	11	1.5	.02
17	.00	.52	155	838	75	33	19	77	49	10	1.1	.00
18	.00	.53	129	579	72	32	18	67	45	9.0	1.0	.00
19	.00	.33	112	424	70	31	37	58	40	8.0	1.0	.00
20	.00	.46	97	342	67	29	57	54	36	7.2	1.0	.00
21	.00	.63	105	304	65	29	50	49	34	6.4	1.0	.00
22	.00	.69	151	303	62	29	51	45	32	5.8	1.0	.00
23	.00	.56	141	336	62	31	66	43	29	5.1	1.0	.00
24	.00	.55	119	350	59	32	62	41	26	4.6	1.0	.00
25	.00	.56	106	314	56	30	53	39	24	4.3	1.0	.00
26	.00	.52	98	285	56	28	47	36	23	3.9	1.0	.00
27	.00	.47	89	260	55	27	43	34	21	3.6	1.0	.00
28	.00	.45	89	243	54	26	39	35	20	3.5	.88	.00
29	.00	.45	91	393	54	25	43	38	18	3.5	.62	.00
30	.00	2.0	85	480	---	25	47	36	17	3.4	.62	.00
31	.00	---	78	379	---	24	---	32	---	3.2	.62	---
TOTAL	0.00	8.72	19513	20509	3248	1196	960	1711	1917	296.5	54.24	3.99
MEAN	.00	.29	629	662	112	38.6	32.0	55.2	63.9	9.56	1.75	.13
MAX	.00	2.0	4450	1640	320	84	66	112	130	16	3.2	.54
MIN	.00	.00	78	71	54	24	18	32	17	3.2	.62	.00
AC-FT	.0	17	38700	40680	6440	2370	1900	3390	3800	588	108	7.9

CAL YR 1987 TOTAL 62658.16 MEAN 172 MAX 4450 MIN .00 AC-FT 124300
WTR YR 1988 TOTAL 49417.45 MEAN 135 MAX 4450 MIN .00 AC-FT 98020

MAD RIVER BASIN

11480400 RUTH RESERVOIR NEAR FOREST GLEN, CA

LOCATION.--Lat 40°22'08", long 123°25'56", in NW 1/4 NW 1/4 sec.19, T.1 S., R.7 E., Trinity County, Hydrologic Unit 18010102, Six Rivers National Forest, near center of Robert W. Matthews Dam on Mad River, 5.6 mi west of Forest Glen.

DRAINAGE AREA.--121 mi^2.

PERIOD OF RECORD.--October 1966 to current year. Records prior to October 1966 in files of Humboldt Bay Municipal Water District.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Humboldt Bay Municipal Water District).

REMARKS.--Estimated daily contents: Oct. 1-28, Dec. 10-14, Dec. 31 to Jan. 4, Jan. 30 to Feb. 7, Mar. 1 to Apr. 13, June 24 to July 25, July 30 to Aug. 22. Reservoir is formed by earthfill dam; storage began July 1961. Total capacity, 48,000 acre-ft at elevation 2,654.0 ft, crest of spillway. Minimum pool capacity, 7,800 acre-ft at elevation 2,600 ft. Water is released down Mad River for municipal use. Records given herein represent total contents.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 68,000 acre-ft, Feb. 17, 1986, elevation, 2,667.06 ft; minimum, 11,700 acre-ft, Oct. 24-28, 1977; minimum elevation, 2,607.13 ft, Oct. 28, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 52,000 acre-ft, Jan. 11, elevation, 2,657.38 ft; minimum contents, 17,000 acre-ft, Nov. 29, elevation, 2,618.22 ft.

Capacity table (elevation, in feet NGVD, and contents, in acre-feet)
(Based on survey by Humboldt Bay Municipal Water District in 1977)

2,595	5,920	2,620	18,100	2,645	38,600
2,600	7,810	2,625	21,500	2,650	43,700
2,605	10,000	2,630	25,300	2,655	49,200
2,610	12,500	2,635	29,400	2,660	55,100
2,615	15,100	2,640	33,800	2,664	60,200

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25000	19300	18400	46100	49100	45600	47300	48300	48100	47500	44000	37900
2	24800	19100	23300	46000	49000	45600	47300	48300	48000	47500	43800	37600
3	24600	18900	25300	47700	48800	45600	47300	48300	47900	47400	43600	37400
4	24400	18800	29400	49900	48700	45600	47400	48200	48000	47300	43500	37200
5	24200	18600	31600	50400	48600	45600	47400	48000	48000	47200	43300	37000
6	24000	18500	36000	49900	48400	45600	47500	48100	48100	47200	43000	36800
7	23800	18300	38600	49700	48300	45600	47500	48200	48100	47100	42800	36600
8	23700	18200	40400	50000	48200	45700	47500	48200	48000	47100	42600	36400
9	23500	18100	44900	51100	48100	45800	47500	48100	47900	47000	42400	36200
10	23300	18000	50500	51700	48000	45900	47600	48000	47800	46900	42200	36000
11	23100	17900	51700	51500	47900	46000	47600	48100	48000	46900	42000	35700
12	22900	17900	50800	50800	47700	46000	47600	48100	47900	46800	41800	35500
13	22700	17700	49600	50500	47500	46100	47600	48100	48000	46700	41600	35300
14	22500	17700	49200	50900	[illegible]	46300	47600	48100	48000	46600	41400	35100
15	22300	17600	48900	51200	47200	46300	47600	48100	48000	46500	41200	34800
16	22100	17700	48700	51000	46900	46400	47600	48100	48000	46400	41000	34600
17	21900	17600	48500	50500	46700	46400	47600	48100	47900	46300	40800	34300
18	21700	17600	48300	50000	46500	46600	47700	48100	48000	46200	40600	34100
19	21500	17500	48100	49700	46200	46600	47900	48000	47900	46100	40500	33900
20	21300	17500	48000	49400	45900	46600	48100	48000	48000	46000	40300	33700
21	21100	17400	47900	49200	45700	46700	48200	48000	48000	45800	40100	33500
22	21000	17400	47800	49100	45600	46700	48300	47900	48000	45700	39900	33300
23	20800	17400	47700	49100	45600	46800	48200	48000	48000	45600	39700	33100
24	20700	17300	47500	49200	45600	46900	48100	48000	47900	45400	39500	32900
25	20500	17200	47400	49100	45600	47000	47900	48000	47900	45200	39300	32800
26	20300	17200	47200	49000	45500	47000	48000	48000	47900	45100	39100	32600
27	20200	17100	47000	48900	45500	47000	47900	48000	47800	44900	38900	32300
28	20000	17100	46900	48900	45500	47100	48000	48000	47700	44700	38700	32200
29	19800	17000	46700	49300	45500	47100	48100	47900	47700	44600	38500	32000
30	19600	17100	46400	49400	---	47200	48200	47900	47600	44400	38300	31800
31	19400	---	46300	49300	---	47200	---	48000	---	44200	38100	---
MAX	25000	19300	51700	51700	49100	47200	48300	48300	48100	47500	44000	37900
MIN	19400	17000	18400	46000	45500	45600	47300	47900	47600	44200	38100	31800
a	2621.98	2618.41	2652.42	2655.09	2651.66	2653.27	2654.15	2653.94	2653.58	2650.43	2644.43	2637.68
b	-5700	-2300	+29200	+3000	-3800	+1700	+1000	-200	-400	-3400	-6100	-6300

CAL YR 1987 MAX 53400 MIN 17000 b +20100
WTR YR 1988 MAX 51700 MIN 17000 b +6700

a Elevation, in feet NGVD, at end of month.
b Change in contents, in acre-feet.

11480410 MAD RIVER BELOW RUTH RESERVOIR, NEAR FOREST GLEN, CA

LOCATION.--Lat 40°22'16", long 123°26'06", in SW 1/4 SW 1/4 sec.18, T.1 S., R.7 E., Trinity County, Hydrologic Unit 18010102, Six Rivers National Forest, 1,200 ft downstream from Robert W. Matthews Dam, 5.3 mi northwest of Ruth, and 5.8 mi west of Forest Glen.

DRAINAGE AREA.--121 mi^2.

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 2,560 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good except flows below 10 ft^3/s which are fair. Flow regulated by Ruth Reservoir (station 11480400) 0.3 mi upstream.

AVERAGE DISCHARGE.--8 years, 328 ft^3/s, 237,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,800 ft^3/s, Feb. 17, 1986, gage height, 17.61 ft, from floodmarks, from rating curve extended above 8,800 ft^3/s; minimum daily, 6.4 ft^3/s, Dec. 25-28, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,300 ft^3/s, Dec. 10, gage height, 8.37 ft; minimum daily, 8.4 ft^3/s, Mar. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	88	9.2	216	523	79	8.7	28	100	40	85	98
2	93	86	11	217	427	71	8.7	33	149	40	85	98
3	95	84	9.1	221	396	79	9.0	34	143	40	85	98
4	95	85	12	659	362	71	9.1	100	99	40	87	98
5	95	83	9.6	1150	319	67	8.9	108	72	40	97	97
6	95	77	15	941	284	67	8.9	41	73	40	97	98
7	93	74	79	742	259	67	8.9	67	116	39	97	97
8	95	64	208	737	238	44	8.9	130	143	39	94	96
9	94	55	183	1230	224	9.0	8.9	148	140	40	90	96
10	93	50	1170	1710	215	9.1	8.9	113	95	40	90	96
11	93	56	2000	2050	215	8.9	19	75	72	41	90	96
12	93	62	1250	1480	217	9.0	30	76	72	41	89	101
13	92	62	807	1180	217	9.1	19	76	73	41	90	107
14	93	31	575	1170	217	8.9	17	76	73	45	90	108
15	92	15	408	1590	218	8.5	14	77	73	48	90	108
16	92	19	340	1600	219	8.4	14	76	54	48	90	108
17	92	30	305	1340	219	11	14	75	39	48	90	108
18	91	36	254	1020	218	15	14	75	39	59	89	107
19	91	33	222	787	219	8.9	12	73	39	68	90	102
20	91	32	213	632	219	8.9	9.1	60	40	68	89	99
21	92	23	214	533	219	8.9	11	52	39	68	89	99
22	91	22	213	487	135	8.9	38	51	39	68	93	97
23	91	22	211	484	78	8.9	107	43	39	74	100	94
24	90	29	195	500	78	8.9	151	38	39	77	99	93
25	90	31	213	487	78	8.9	103	38	39	76	99	93
26	90	33	214	457	78	8.9	71	37	39	81	98	93
27	90	31	214	424	78	8.9	48	37	39	85	99	93
28	89	35	214	396	78	9.3	29	38	38	85	99	93
29	88	36	213	418	78	8.9	12	38	39	85	99	91
30	88	19	215	592	---	8.9	20	38	39	86	99	92
31	88	---	215	581	---	8.8	---	38	---	85	98	---
TOTAL	2848	1403	10410.9	26031	6325	757.9	841.0	1989	2093	1775	2876	2954
MEAN	91.9	46.8	336	840	218	24.4	28.0	64.2	69.8	57.3	92.8	98.5
MAX	95	88	2000	2050	523	79	151	148	149	86	100	108
MIN	88	15	9.1	216	78	8.4	8.7	28	38	39	85	91
AC-FT	5650	2780	20650	51630	12550	1500	1670	3950	4150	3520	5700	5860

CAL YR 1987 TOTAL 74907.4 MEAN 205 MAX 3530 MIN 7.0 AC-FT 148600
WTR YR 1988 TOTAL 60303.8 MEAN 165 MAX 2050 MIN 8.4 AC-FT 119600

11480500 MAD RIVER NEAR FOREST GLEN, CA

LOCATION.--Lat 40°27'30", long 123°30'35", in SW 1/4 sec.16, T.1 N., R.6 E., Trinity County, Hydrologic Unit 18010102, Six Rivers National Forest, on right bank 0.7 mi downstream from Lamb Creek and 11.1 mi northwest of Forest Glen.

DRAINAGE AREA.--143 mi^2.

PERIOD OF RECORD.--June 1953 to current year.

REVISED RECORDS.--WSP 1395: 1954. WSP 1715: 1957(M), 1958(P). WSP 1929: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,408.18 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 22, 1955, water-stage recorder at site 0.7 mi upstream at different datum. Jan. 13 to June 18, 1956, nonrecording gage at former site at datum 4.17 ft lower than former datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Ruth Reservoir (station 11480400), 9 mi upstream, beginning in July 1961. No diversion above station.

AVERAGE DISCHARGE.--35 years, 381 ft^3/s, 276,000 acre-ft/yr (unadjusted).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,200 ft^3/s, Dec. 22, 1955, gage height, 24.5 ft, present datum, from floodmarks, from rating curve extended above 8,100 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 0.60 ft^3/s, Sept. 15, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,640 ft^3/s, Dec. 11, gage height, 7.56 ft; minimum daily, 19 ft^3/s, Apr. 9-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	87	107	227	608	113	20	39	93	46	87	98
2	91	86	388	229	526	101	20	45	159	46	87	98
3	92	84	124	388	445	104	20	50	153	46	87	97
4	93	84	349	935	401	101	20	77	128	46	86	96
5	93	84	136	1380	352	94	20	144	90	46	96	96
6	93	81	611	1120	315	93	20	59	91	47	98	96
7	91	76	282	891	285	91	20	75	115	46	98	96
8	91	72	399	901	263	85	20	128	151	46	97	95
9	91	65	612	1520	247	32	19	159	149	46	91	94
10	91	60	1730	2040	236	27	19	140	122	46	91	95
11	91	61	2310	2390	234	26	19	90	88	46	90	96
12	91	66	1480	1780	232	25	43	90	87	47	89	99
13	91	69	959	1420	232	25	28	90	87	47	90	104
14	91	60	666	1450	232	24	28	90	86	49	90	107
15	91	29	467	1870	231	24	25	90	85	54	90	107
16	90	33	360	1890	230	23	24	92	78	55	90	107
17	90	39	331	1580	230	22	24	90	56	54	90	107
18	90	49	277	1240	228	29	23	89	55	57	91	106
19	90	44	240	951	227	24	34	88	55	70	90	104
20	90	48	226	759	227	22	27	79	55	70	90	100
21	90	40	240	634	227	22	25	64	54	70	90	99
22	90	36	252	575	176	22	34	64	53	71	90	98
23	90	36	240	583	96	22	95	60	53	73	98	95
24	90	39	233	603	96	22	160	51	53	79	98	95
25	89	42	230	588	96	22	126	49	52	79	98	95
26	88	44	227	552	97	21	90	49	52	81	97	95
27	88	44	226	509	98	21	73	48	52	86	98	95
28	89	44	229	469	102	21	52	50	49	87	98	95
29	88	47	229	512	103	21	29	50	46	87	98	92
30	88	51	228	704	---	21	31	49	46	87	98	93
31	87	---	226	685	---	20	---	50	---	87	98	---
TOTAL	2799	1700	14614	31375	7072	1320	1188	2388	2493	1897	2879	2950
MEAN	90.3	56.7	471	1012	244	42.6	39.6	77.0	83.1	61.2	92.9	98.3
MAX	93	87	2310	2390	608	113	160	159	159	87	98	107
MIN	87	29	107	227	96	20	19	39	46	46	86	92
AC-FT	5550	3370	28990	62230	14030	2620	2360	4740	4940	3760	5710	5850

CAL YR 1987	TOTAL 89449	MEAN 245	MAX 4020	MIN 19	AC-FT 177400
WTR YR 1988	TOTAL 72675	MEAN 199	MAX 2390	MIN 19	AC-FT 144200

MAD RIVER BASIN

11481000 MAD RIVER NEAR ARCATA, CA

LOCATION.--Lat 40°54'35", long 124°03'35", in NW 1/4 NW 1/4 sec.15, T.6 N., R.1 E., Humboldt County, Hydrologic Unit 18010102, on right bank 100 ft upstream from bridge on U.S. Highway 299, 1.0 mi downstream from Warren Creek, and 2.8 mi northeast of Arcata.

DRAINAGE AREA.--485 mi^2.

PERIOD OF RECORD.--October 1910 to September 1913, August 1950 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.--WDR CA-72-1: 1965(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 12.79 ft above National Geodetic Vertical Datum of 1929. December 1910 to September 1913, nonrecording gage at site 0.1 mi upstream at different datum. Aug. 15, 1950, to July 23, 1956, water-stage recorder at site 0.6 mi upstream at datum 11.00 ft higher. July 24, 1956, to Apr. 9, 1965, water-stage recorder at datum 5.00 ft higher, at present site.

REMARKS.--Estimated daily discharges: Dec. 2. Records good except those for flows below 150 ft^3/s, which are fair. Flow regulated by Ruth Reservoir (station 11480400), 68 mi upstream, beginning in July 1961. Water is diverted 0.5 mi upstream from station for municipal supply and industrial use in Humboldt Bay area.

AVERAGE DISCHARGE (adjusted for diversions).--41 years, 1,494 ft^3/s, 1,082,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 81,000 ft^3/s, Dec. 22, 1964, gage height, 30.7 ft, present datum, from high-water profile and flood routing study; minimum daily, 0.10 ft^3/s, Aug. 29, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,700 ft^3/s, Dec. 10, gage height, 13.91 ft; minimum daily, 19 ft^3/s, Sept. 12, 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	50	874	528	1650	340	88	535	3820	106	34	30
2	25	55	8640	493	1420	330	86	427	2630	93	32	28
3	29	46	3870	855	1240	299	119	389	1570	85	32	31
4	28	38	4960	1450	1080	287	156	352	1180	82	31	33
5	28	33	3420	1740	971	313	128	330	1240	73	34	28
6	25	30	6980	1610	882	297	105	408	1490	67	35	27
7	25	34	5570	1360	828	272	96	424	1700	59	44	27
8	28	31	4300	1630	798	252	90	579	1270	57	44	29
9	24	41	3760	4190	785	251	83	598	1070	52	41	28
10	27	43	13800	6010	758	238	75	538	928	47	37	27
11	27	34	7450	8880	704	209	68	453	756	44	35	24
12	28	30	3850	5850	665	191	64	365	620	41	35	19
13	28	84	2240	3990	654	180	65	414	541	40	36	19
14	28	131	1470	4070	632	173	85	369	471	43	35	28
15	28	85	1120	8420	594	164	75	328	423	37	37	36
16	31	64	894	8870	567	150	70	496	373	34	37	32
17	32	57	727	5760	533	140	65	747	347	33	36	33
18	30	55	616	3780	506	129	62	529	291	32	35	33
19	26	52	536	2770	482	121	73	433	254	30	31	33
20	27	64	485	2130	462	118	153	373	234	27	29	40
21	27	204	534	1800	448	125	198	326	210	33	27	35
22	26	131	863	1610	437	128	320	264	189	33	26	33
23	43	70	823	1570	415	160	397	234	174	28	25	33
24	45	52	634	1620	364	216	361	210	161	26	26	31
25	36	61	563	1570	342	176	388	189	148	28	33	27
26	31	61	517	1490	328	155	338	173	147	33	33	25
27	29	50	485	1410	314	147	267	166	136	33	32	27
28	31	43	495	1320	305	134	225	193	132	33	35	28
29	33	35	529	1470	298	118	251	275	120	36	34	27
30	36	39	579	2070	---	103	412	230	116	37	31	24
31	33	---	603	1860	---	98	---	230	---	35	32	---
TOTAL	920	1803	82187	92176	19462	6014	4963	11577	22741	1437	1044	875
MEAN	29.7	60.1	2651	2973	671	194	165	373	758	46.4	33.7	29.2
MAX	45	204	13800	8880	1650	340	412	747	3820	106	44	40
MIN	24	30	485	493	298	98	62	166	116	26	25	19
AC-FT	1820	3580	163000	182800	38600	11930	9840	22960	45110	2850	2070	1740
a	4850	3980	4360	4480	4360	4700	4450	4970	4740	5470	5340	5180

CAL YR 1987 TOTAL 327185 MEAN 896 MAX 13800 MIN 13 AC-FT 649000
WTR YR 1988 TOTAL 245199 MEAN 670 MAX 13800 MIN 19 AC-FT 486400

a Diversion, in acre-feet, for municipal supply and industrial use; provided by Humboldt Bay Municipal Water District.

11481200 LITTLE RIVER NEAR TRINIDAD, CA

LOCATION.--Lat 41°00'40", long 124°04'50", in NE 1/4 sec.8, T.7 N., R.1 E., Humboldt County, Hydrologic Unit 18010102, on right bank 0.5 mi upstream from Coon Creek, 4.7 mi southeast of Trinidad, and 9.1 mi north of Arcata.

DRAINAGE AREA.--40.5 mi^2.

PERIOD OF RECORD.--October 1955 to current year. Prior to October 1971, published as "at Crannell."

REVISED RECORDS.--WSP 2129: 1956-60. WDR CA-78-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 17.62 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Apr. 29 to May 15, June 8-15, Sept. 16-21. Records fair. No storage or diversion above station.

AVERAGE DISCHARGE.--33 years, 143 ft^3/s, 103,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,830 ft^3/s, Mar. 18, 1975, gage height, 14.19 ft, from rating curve extended above 3,100 ft^3/s on basis of slope-area measurement at gage height 14.08 ft; minimum daily, 2.8 ft^3/s, Oct. 20-22, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 17, 18, 1953, reached a stage of 15.7 ft, observed by an employee of Hammond Lumber Co.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 10	0500	*3,560	*8.26				

Minimum daily, 3.0 ft^3/s, Oct. 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	8.9	383	119	114	54	22	58	1460	30	12	6.4
2	3.3	10	1450	98	98	38	22	53	491	29	12	6.2
3	4.2	6.8	356	246	86	33	42	46	390	28	12	6.2
4	4.2	5.7	793	219	78	40	42	42	245	28	11	6.2
5	4.1	5.1	434	165	72	65	33	40	192	27	12	6.2
6	4.2	5.1	797	129	68	55	29	50	170	24	13	6.2
7	3.3	5.1	503	140	63	50	28	73	195	24	13	6.2
8	3.0	5.4	487	320	59	44	26	110	168	24	13	6.3
9	3.0	11	431	644	58	47	24	98	145	24	12	6.5
10	4.6	11	2030	951	56	47	23	84	125	22	11	6.2
11	5.1	7.5	537	941	53	43	21	74	110	22	11	6.2
12	5.1	6.3	297	535	50	39	20	70	99	21	11	6.2
13	5.1	42	205	359	48	37	20	82	88	21	12	6.2
14	5.5	26	155	506	46	35	20	76	84	21	13	6.2
15	5.1	14	133	1160	44	33	20	90	79	20	12	5.9
16	5.1	13	116	1510	43	30	21	135	69	19	11	5.6
17	5.1	21	99	616	40	29	21	94	65	18	11	5.5
18	5.1	21	84	394	39	28	20	63	59	17	10	5.4
19	5.1	14	75	286	38	26	22	52	54	17	9.1	5.4
20	5.1	49	68	224	36	26	23	45	51	16	8.7	5.4
21	5.1	66	75	183	35	25	31	39	48	15	8.2	5.4
22	4.8	30	144	150	34	25	50	35	44	15	7.4	5.6
23	4.6	20	123	128	34	35	49	32	43	14	7.4	5.9
24	5.6	21	96	111	34	35	37	30	39	14	7.4	6.2
25	5.7	28	83	99	32	30	32	28	38	14	7.4	6.1
26	5.7	19	74	89	31	27	28	26	37	14	7.4	5.7
27	5.5	15	67	83	30	27	26	24	35	13	7.4	5.7
28	5.1	13	78	77	29	25	24	60	34	13	7.4	5.7
29	5.1	12	113	145	29	25	33	64	32	13	7.4	6.0
30	5.1	16	158	167	---	24	65	43	31	13	7.2	5.7
31	4.7	---	159	129	---	23	---	68	---	12	6.8	---
TOTAL	145.6	527.9	10603	10923	1477	1100	874	1884	4720	602	311.2	178.6
MEAN	4.70	17.6	342	352	50.9	35.5	29.1	60.8	157	19.4	10.0	5.95
MAX	5.7	66	2030	1510	114	65	65	135	1460	30	13	6.5
MIN	3.0	5.1	67	77	29	23	20	24	31	12	6.8	5.4
AC-FT	289	1050	21030	21670	2930	2180	1730	3740	9360	1190	617	354

CAL YR 1987 TOTAL 35504.3 MEAN 97.3 MAX 2030 MIN 3.0 AC-FT 70420
WTR YR 1988 TOTAL 33346.3 MEAN 91.1 MAX 2030 MIN 3.0 AC-FT 66140

11481500 REDWOOD CREEK NEAR BLUE LAKE, CA

LOCATION.--Lat 40°54'22", long 123°48'51", in SE 1/4 NE 1/4 sec.15, T.6 N., R.3 E., Humboldt County, Hydrologic Unit 18010102, on right bank 400 ft upstream from Lupton Creek and 9.1 mi east of town of Blue Lake.

DRAINAGE AREA.--67.7 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1953 to September 1958, October 1972 to current year.

REVISED RECORDS.--WDR CA-78-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 850 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--21 years, 251 ft^3/s, 181,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,200 ft^3/s, Mar. 18, 1975, gage height, 13.70 ft, from rating curve extended above 6,400 ft^3/s; minimum daily, 1.8 ft^3/s, Oct. 19-22, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 2	1430	2,330	6.37	Dec. 10	0700	*3,900	*8.03
Dec. 6	0915	2,950	7.10				

Minimum daily, 1.8 ft^3/s, Oct. 19-22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	3.4	627	130	250	122	57	121	585	50	14	6.3
2	2.0	6.5	1720	126	222	103	55	113	364	49	14	5.8
3	2.0	5.8	542	323	202	95	67	110	285	47	13	5.3
4	2.0	4.8	726	329	188	94	66	109	237	47	13	5.2
5	2.0	4.2	470	267	177	108	59	104	329	44	12	5.2
6	2.0	4.1	1440	223	167	103	55	100	372	42	12	5.0
7	2.0	4.1	712	220	157	101	54	142	328	40	13	5.1
8	2.0	4.4	721	278	152	93	53	169	276	38	12	5.2
9	2.0	6.6	733	715	168	98	51	148	246	36	12	5.1
10	2.0	8.1	2190	926	172	96	48	130	217	34	11	5.0
11	2.0	6.8	789	914	166	89	46	115	194	34	11	5.2
12	2.2	6.4	496	578	161	83	45	107	174	33	11	4.8
13	2.2	25	364	485	155	78	44	115	157	33	11	4.7
14	2.0	34	292	712	145	74	45	98	142	33	12	4.5
15	2.0	25	251	982	138	71	45	90	127	32	12	4.5
16	2.0	30	223	911	130	67	45	128	118	30	12	4.5
17	2.0	32	198	605	122	64	43	138	112	28	11	4.7
18	1.9	33	176	452	115	61	42	113	103	26	10	5.0
19	1.8	26	160	371	110	60	56	101	97	24	9.7	5.0
20	1.8	27	143	316	104	58	68	91	90	23	9.6	6.4
21	1.8	59	218	278	100	62	78	81	81	22	9.3	6.3
22	1.8	44	293	257	99	62	97	74	77	21	9.0	5.5
23	2.0	36	243	254	97	102	101	71	74	20	8.6	5.2
24	2.9	35	206	258	94	97	86	67	69	19	8.6	5.0
25	2.8	42	186	248	93	81	77	64	65	19	7.9	4.7
26	2.7	41	172	240	91	74	70	60	62	18	7.7	4.8
27	3.5	35	160	239	91	73	65	58	61	18	6.8	5.3
28	4.2	33	154	238	91	69	61	73	57	17	6.5	5.7
29	4.2	30	147	305	91	65	77	89	56	16	6.3	5.4
30	3.4	60	141	345	---	62	121	74	53	15	6.3	4.7
31	2.2	---	140	284	---	60	---	79	---	15	6.3	---
TOTAL	71.4	712.2	15033	12809	4048	2525	1877	3132	5208	923	318.6	155.1
MEAN	2.30	23.7	485	413	140	81.5	62.6	101	174	29.8	10.3	5.17
MAX	4.2	60	2190	982	250	122	121	169	585	50	14	6.4
MIN	1.8	3.4	140	126	91	58	42	58	53	15	6.3	4.5
AC-FT	142	1410	29820	25410	8030	5010	3720	6210	10330	1830	632	308

CAL YR 1987	TOTAL 56361.8	MEAN 154	MAX 2190	MIN 1.8	AC-FT 111800
WTR YR 1988	TOTAL 46812.3	MEAN 128	MAX 2190	MIN 1.8	AC-FT 92850

REDWOOD CREEK BASIN

11481500 REDWOOD CREEK NEAR BLUE LAKE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.
CHEMICAL DATA: Water years 1974-75.
WATER TEMPERATURE: Water years 1973 to current year.
SEDIMENT DATA: Water years 1973 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1972 to September 1981, October 1981 to current year (storm season only).
SUSPENDED-SEDIMENT DISCHARGE: October 1972 to September 1981, October 1981 to current year (storm season only).

REMARKS.--Sediment samples were collected on most days where a water temperature is published.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum recorded, 33.5 °C, Aug. 2, 1977; minimum recorded, 0.5 °C, Jan. 9, 1977.
SEDIMENT CONCENTRATION: Maximum daily mean, 11,200 mg/L, Mar. 18, 1975; minimum daily mean, 0 mg/L, on several days in 1976, 1980, 1983-85, and 1988.
SEDIMENT LOAD: Maximum daily, 276,000 tons, Mar. 18, 1975; minimum daily, 0 ton, several days in 1976, 1980, 1983-85, and 1988.

EXTREMES FOR CURRENT YEAR (storm season only).--
SEDIMENT CONCENTRATION: Maximum daily mean, 1,470 mg/L, Dec. 10; minimum daily mean, 0 mg/L, several days.
SEDIMENT LOAD: Maximum daily, 10,900 tons, Dec. 10; minimum daily, 0 ton, several days.

WATER TEMPERATURE, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR
1	15.0	---	8.0	---	---	---	---
2	---	---	11.0	---	---	---	---
3	---	---	10.0	6.0	3.5	---	11.0
4	---	---	9.5	---	---	---	---
5	---	10.0	10.0	---	---	---	---
6	---	---	---	---	---	10.0	---
7	---	---	8.0	---	---	---	---
8	---	---	8.0	6.0	---	---	---
9	---	---	10.0	---	10.0	---	---
10	---	10.0	10.0	---	---	---	---
11	---	---	6.0	5.5	7.0	---	17.0
12	---	---	4.5	6.0	---	---	---
13	---	13.0	4.0	---	---	11.0	---
14	---	12.0	---	---	---	6.5	---
15	---	---	---	---	---	---	---
16	---	10.0	---	5.0	---	---	---
17	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---
19	---	---	---	---	---	---	12.0
20	---	---	---	---	6.0	12.0	11.0
21	---	10.0	8.0	7.0	---	---	10.0
22	---	---	6.0	---	---	---	9.0
23	15.0	---	---	7.0	---	---	---
24	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---
27	---	6.0	---	---	---	---	---
28	---	---	---	---	---	---	---
29	---	---	---	---	9.0	8.0	14.0
30	---	---	4.5	---	---	---	---
31	15.0	---	---	---	---	---	---

11481500 REDWOOD CREEK NEAR BLUE LAKE, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	2.0	1	.01	3.4	1	.01	627	424	1210
2	2.0	1	.01	6.5	1	.02	1720	933	4720
3	2.0	1	.01	5.8	1	.02	542	170	249
4	2.0	1	.01	4.8	1	.01	726	361	882
5	2.0	1	.01	4.2	0	.00	470	80	102
6	2.0	1	.01	4.1	0	.00	1440	838	4450
7	2.0	1	.01	4.1	0	.00	712	260	500
8	2.0	1	.01	4.4	0	.00	721	203	434
9	2.0	1	.01	6.6	1	.02	733	172	369
10	2.0	1	.01	8.1	1	.02	2190	1470	10900
11	2.0	1	.01	6.8	1	.02	789	200	426
12	2.2	1	.01	6.4	1	.02	496	63	84
13	2.2	1	.01	25	6	.40	364	24	24
14	2.0	1	.01	34	2	.18	292	18	14
15	2.0	1	.01	25	2	.13	251	14	9.5
16	2.0	1	.01	30	3	.24	223	11	6.6
17	2.0	1	.01	32	3	.26	198	9	4.8
18	1.9	1	.01	33	2	.18	176	8	3.8
19	1.8	1	.00	26	2	.14	160	7	3.0
20	1.8	1	.00	27	1	.07	143	6	2.3
21	1.8	1	.00	59	4	.64	218	30	18
22	1.8	1	.00	44	3	.36	293	32	26
23	2.0	1	.01	36	2	.19	243	15	9.8
24	2.9	1	.01	35	2	.19	206	10	5.6
25	2.8	1	.01	42	3	.34	186	8	4.0
26	2.7	1	.01	41	2	.22	172	7	3.3
27	3.5	1	.01	35	1	.09	160	6	2.6
28	4.2	1	.01	33	1	.09	154	5	2.1
29	4.2	1	.01	30	1	.08	147	4	1.6
30	3.4	0	.00	60	8	2.1	141	3	1.1
31	2.2	0	.00	---	---	---	140	3	1.1
TOTAL	71.4	---	0.25	712.2	---	6.04	15033	---	24469.2
		JANUARY			FEBRUARY			MARCH	
1	130	3	1.1	250	4	2.7	122	5	1.6
2	126	3	1.0	222	3	1.8	103	4	1.1
3	323	71	69	202	3	1.6	95	2	.51
4	329	25	22	188	3	1.5	94	2	.51
5	267	15	11	177	3	1.4	108	2	.58
6	223	10	6.0	167	2	.90	103	2	.56
7	220	10	5.9	157	2	.85	101	2	.55
8	278	25	22	152	2	.82	93	2	.50
9	715	130	277	168	2	.91	98	2	.53
10	926	198	729	172	2	.93	96	1	.26
11	914	310	765	166	1	.45	89	1	.24
12	578	96	150	161	1	.43	83	1	.22
13	485	55	72	155	1	.42	78	1	.21
14	712	157	430	145	1	.39	74	1	.20
15	982	310	929	138	1	.37	71	1	.19
16	911	195	480	130	1	.35	67	1	.18
17	605	70	114	122	1	.33	64	1	.17
18	452	40	49	115	1	.31	61	1	.16
19	371	25	25	110	2	.59	60	2	.32
20	316	14	12	104	3	.84	58	9	1.4
21	278	9	6.8	100	3	.81	62	6	1.0
22	257	8	5.6	99	3	.80	62	5	.84
23	254	7	4.8	97	3	.79	102	7	1.9
24	258	7	4.9	94	3	.76	97	5	1.3
25	248	6	4.0	93	3	.75	81	5	1.1
26	240	5	3.2	91	3	.74	74	4	.80
27	239	4	2.6	91	3	.74	73	4	.79
28	238	3	1.9	91	4	.98	69	3	.56
29	305	13	13	91	5	1.2	65	3	.53
30	345	10	9.3	---	---	---	62	3	.50
31	284	6	4.6	---	---	---	60	3	.49
TOTAL	12809	---	4230.7	4048	---	25.46	2525	---	19.80

11481500 REDWOOD CREEK NEAR BLUE LAKE, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL	
1	57	2	.31
2	55	2	.30
3	67	4	.72
4	66	4	.71
5	59	4	.64
6	55	4	.59
7	54	4	.58
8	53	4	.57
9	51	4	.55
10	48	4	.52
11	46	4	.50
12	45	4	.49
13	44	3	.36
14	45	3	.36
15	45	3	.36
16	45	3	.36
17	43	3	.35
18	42	3	.34
19	56	3	.45
20	68	3	.55
21	78	5	1.1
22	97	3	.79
23	101	4	1.1
24	86	3	.70
25	77	2	.42
26	70	2	.38
27	65	2	.35
28	61	2	.33
29	77	2	.42
30	121	6	2.0
31	---	---	---
TOTAL	1877	---	17.20
PERIOD	37075.6		28768.65

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1987	71.40	0.25	0	0
NOVEMBER	712.20	6.04	0	6
DECEMBER	15033.00	24469.20	3680	28100
JANUARY 1988	12809.00	4230.70	1940	6170
FEBRUARY	4048.00	25.46	2	27
MARCH	2525.00	19.80	0	20
APRIL	1877.00	17.20	0	17
PERIOD	37075.60	28768.65	5623	34342

11481500 REDWOOD CREEK NEAR BLUE LAKE, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
DEC								
10...	1255	2240	9.5	1200	7260	15	18	25
10...	1600	1710	9.5	856	3950	15	18	25
11...	1255	748	6.0	169	341	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
DEC								
10...	35	44	53	61	70	81	93	100
10...	35	44	54	63	74	86	96	100
11...	--	--	66	73	80	90	92	100

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	TEMPERATURE WATER (DEG C)	NUMBER OF SAMPLING POINTS (COUNT)	STREAMFLOW, INSTANTANEOUS (CFS)	STREAM WIDTH (FT)	SEDIMENT DISCHARGE, BEDLOAD (TONS/DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM
DEC								
02...	1210	11.0	16	2260	93.0	164	1	8
02...	1525	11.0	16	2210	94.0	114	1	7
04...	1205	9.5	20	1030	76.0	153	1	4

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 64.0 MM
DEC								
02...	30	47	53	57	59	64	88	100
02...	26	50	67	78	84	89	100	--
04...	14	26	39	52	67	87	100	--

11482110 LACKS CREEK NEAR ORICK, CA

LOCATION.--Lat 41°03'39", long 123°51'57", unsurveyed, Humboldt County, Hydrologic Unit 18010102, on right bank at private road bridge, 0.3 mi upstream from mouth, and 19 mi southeast of Orick.

DRAINAGE AREA.--16.9 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 480 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharge. Records fair, except those for August and September, which are poor. No regulation or diversion above gage.

AVERAGE DISCHARGE.--8 years, 70.6 ft^3/s, 51,150 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,070 ft^3/s, Feb. 17, 1986, gage height, 27.15 ft (revised); minimum daily, 0.16 ft^3/s, Sept. 1-4, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 880 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 2	0045	1,570	26.20	Dec. 10	0315	*3,060	*27.14

Minimum daily, 0.18 ft^3/s, Oct. 1-3, 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.18	.70	412	30	61	16	8.2	42	435	11	2.0	.46
2	.18	.84	856	28	53	11	7.7	34	234	10	1.9	.41
3	.18	.71	193	183	47	10	11	30	139	10	1.8	.39
4	.19	.66	348	127	42	11	11	26	102	10	1.8	.39
5	.20	.65	161	88	38	15	9.1	23	111	9.9	1.8	.36
6	.19	.65	342	69	34	13	8.4	22	117	9.3	1.8	.34
7	.18	.61	298	84	31	13	8.2	29	107	8.8	1.7	.34
8	.18	.75	320	162	30	13	7.9	29	87	8.4	1.6	.34
9	.20	2.2	471	325	28	16	7.4	26	97	7.8	1.5	.34
10	.24	1.5	1470	408	25	16	6.9	23	87	6.9	1.3	.34
11	.25	1.2	365	441	23	15	6.6	20	74	6.6	1.3	.34
12	.25	.98	173	277	21	13	6.2	27	66	6.4	1.3	.27
13	.26	11	97	231	20	12	6.2	40	58	6.3	1.4	.26
14	.27	7.1	71	357	18	12	6.9	30	53	6.4	1.5	.26
15	.27	3.5	59	519	17	11	6.4	27	48	6.0	1.5	.26
16	.25	7.8	50	529	16	10	6.2	54	42	5.6	1.4	.26
17	.25	6.1	43	298	15	9.3	6.1	53	35	5.1	1.3	.28
18	.25	4.3	36	174	14	8.7	5.7	43	30	4.6	1.2	.30
19	.25	2.8	31	114	14	8.2	7.8	37	27	4.3	1.0	.32
20	.25	7.8	28	97	13	8.0	10	32	24	3.9	.95	.45
21	.25	13	40	85	13	8.4	17	27	21	3.7	.86	.45
22	.25	5.7	67	73	12	7.9	26	24	19	3.4	.83	.41
23	.40	4.3	55	71	12	20	24	21	18	3.2	.75	.39
24	.52	4.7	46	67	11	16	18	19	16	3.1	.74	.36
25	.45	6.9	42	61	11	13	16	17	15	2.9	.73	.34
26	.44	4.4	38	52	10	12	15	15	15	2.8	.69	.34
27	.42	3.1	33	47	9.7	11	13	14	13	2.7	.62	.40
28	.40	2.5	32	41	9.3	10	12	24	13	2.4	.52	.45
29	.40	2.1	31	73	9.1	9.6	24	24	12	2.3	.51	.41
30	.44	7.2	34	81	---	9.1	44	18	11	2.3	.54	.35
31	.51	---	34	66	---	8.7	---	25	---	2.2	.52	---
TOTAL	8.95	115.75	6276	5258	657.1	366.9	362.9	875	2126	178.3	37.36	10.61
MEAN	.29	3.86	202	170	22.7	11.8	12.1	28.2	70.9	5.75	1.21	.35
MAX	.52	13	1470	529	61	20	44	54	435	11	2.0	.46
MIN	.18	.61	28	28	9.1	7.9	5.7	14	11	2.2	.51	.26
AC-FT	18	230	12450	10430	1300	728	720	1740	4220	354	74	21

CAL YR 1987 TOTAL 19199.96 MEAN 52.6 MAX 1470 MIN .16 AC-FT 38080
WTR YR 1988 TOTAL 16272.87 MEAN 44.5 MAX 1470 MIN .18 AC-FT 32280

11482110 LACKS CREEK NEAR ORICK, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975-76, 1978 to current year.
CHEMICAL DATA: Water years 1975-76, 1978.
SEDIMENT DATA: Water years 1975, 1978 to current year.

REMARKS.--Prior to October 1975, published in U.S. Geological Survey Open-File Report 76-678, "Redwood National Park Studies." Zero bedload discharge observed for flows less than 62 ft^3/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
NOV					
03...	1115	0.70	11.0	1	0.00
30...	1140	8.0	8.0	1	0.02
DEC					
04...	1525	354	11.0	73	70
JAN					
25...	1330	62	7.5	6	1.0
MAR					
01...	1225	16	8.5	3	0.13
APR					
11...	1245	6.7	14.0	1	0.02

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	NUMBER OF SAM-PLING POINTS (COUNT)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 128 MM
OCT												
07...	1200	13	0.18	1	2	2	3	6	13	35	79	100

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	NUMBER OF SAM-PLING POINTS (COUNT)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	STREAM WIDTH (FT)	SEDI-MENT DIS-CHARGE, BEDLOAD (TONS/DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM
DEC							
04...	1555	23	350	44.0	37	1	3

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM
DEC						
04...	8	28	59	83	97	100

11482120 REDWOOD CREEK ABOVE PANTHER CREEK, NEAR ORICK, CA

LOCATION.--Lat 41°05'21", long 123°54'23", unsurveyed, Humboldt County, Hydrologic Unit 18010102, on right bank 100 ft upstream from Panther Creek, 2.0 mi upstream from south boundary of Redwood National Park, 16 mi southeast of Orick, and 28 mi upstream from mouth.

DRAINAGE AREA.--150 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 400 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair.

AVERAGE DISCHARGE.--8 years, 576 ft^3/s, 417,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,700 ft^3/s, Feb. 17, 1986, gage height, 17.49 ft; minimum daily, 3.2 ft^3/s, Sept. 15-18, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 2	1430	5,600	10.15	Jan. 15	0300	5,200	9.73
Dec. 10	0700	*9,250	*13.53				

Minimum daily, 3.2 ft^3/s, Sept. 15-18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	22	1220	266	610	228	108	262	2120	116	33	6.4
2	4.9	17	4450	252	536	193	104	224	1450	113	32	6.4
3	4.8	15	1080	852	481	175	129	210	955	108	31	6.4
4	4.7	13	1510	855	438	172	134	198	719	109	29	6.4
5	4.7	12	828	660	403	204	115	187	825	103	29	5.8
6	4.7	11	2380	523	374	195	108	180	1000	97	29	5.2
7	4.6	9.8	1710	545	352	190	106	233	932	92	29	5.2
8	4.4	9.7	1590	821	345	176	102	284	765	87	29	5.2
9	4.4	18	1810	1980	343	189	98	253	742	82	28	5.2
10	4.4	18	6580	2580	340	189	94	223	653	73	25	5.0
11	4.4	16	2570	3410	325	176	89	199	555	71	21	4.6
12	4.4	14	1470	2290	310	165	86	195	482	71	21	4.6
13	4.4	44	1000	1910	297	154	84	236	424	71	21	4.1
14	4.5	66	765	2340	278	148	87	194	375	70	21	3.6
15	4.7	43	621	3630	265	142	87	176	339	67	21	3.2
16	4.7	44	516	3990	252	135	85	270	310	64	21	3.2
17	4.7	54	419	2640	238	126	83	318	289	61	21	3.2
18	4.7	49	364	1950	226	120	80	252	266	57	21	3.2
19	4.7	39	331	1560	217	116	87	220	244	53	20	3.9
20	4.7	39	298	1230	207	112	115	196	226	49	17	5.1
21	4.7	89	389	1030	199	115	149	176	207	48	16	5.2
22	4.7	66	589	886	195	116	185	158	194	44	14	5.8
23	4.8	48	505	800	190	181	198	151	183	41	13	5.8
24	5.4	41	410	735	180	196	163	142	169	42	13	5.4
25	6.3	51	363	665	175	155	145	132	158	41	12	4.6
26	7.0	50	331	613	169	142	132	124	153	39	12	4.6
27	7.0	39	302	579	169	138	122	118	145	38	11	4.6
28	6.8	33	292	547	169	129	115	148	139	37	8.9	4.6
29	6.2	29	281	706	164	122	153	186	130	34	6.4	4.6
30	6.2	39	293	886	---	117	253	149	110	34	6.4	4.6
31	6.2	---	298	694	---	113	---	157	---	34	6.4	---
TOTAL	157.7	1038.5	35565	42425	8447	4829	3596	6151	15259	2046	618.1	145.7
MEAN	5.09	34.6	1147	1369	291	156	120	198	509	66.0	19.9	4.86
MAX	7.0	89	6580	3990	610	228	253	318	2120	116	33	6.4
MIN	4.4	9.7	281	252	164	112	80	118	110	34	6.4	3.2
AC-FT	313	2060	70540	84150	16750	9580	7130	12200	30270	4060	1230	289

CAL YR 1987 TOTAL 149138.0 MEAN 409 MAX 6580 MIN 4.4 AC-FT 295800
WTR YR 1988 TOTAL 120278.0 MEAN 329 MAX 6580 MIN 3.2 AC-FT 238600

11482120 REDWOOD CREEK ABOVE PANTHER CREEK, NEAR ORICK, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974-76, 1980 to current year.
CHEMICAL DATA: Water years 1974-75.
SEDIMENT DATA: Water years 1974-76, 1980 to current year.

REMARKS.--Prior to October 1975, published in U.S. Geological Survey Open-File Report 76-678, "Redwood National Park Studies." Zero-bedload discharge observed for flows less than 189 ft^3/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
OCT								
23...	1510	4.7	16.0	1	0.01	--	--	--
NOV								
10...	1415	17	13.0	2	0.09	--	--	--
24...	1300	40	9.5	1	0.11	--	--	--
DEC								
02...	1330	5240	12.0	1020	14400	18	23	32
04...	1550	1970	12.0	631	3360	--	--	--
10...	1440	6420	12.0	1430	24800	15	21	30
JAN								
15...	1345	3000	8.5	443	3590	--	--	--
16...	1120	4140	6.5	530	5920	--	--	--
16...	1310	3970	7.0	444	4760	--	--	--
FEB								
24...	1415	179	9.0	1	0.48	--	--	--
MAR								
16...	1330	135	10.0	3	1.1	--	--	--
APR								
01...	1120	110	11.0	2	0.59	--	--	--
MAY								
05...	1500	189	13.0	2	1.0	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
OCT								
23...	--	--	--	--	--	--	--	--
NOV								
10...	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--
DEC								
02...	45	57	67	76	86	94	98	100
04...	--	--	54	59	65	77	94	100
10...	40	51	60	69	79	87	93	98
JAN								
15...	--	--	52	60	73	89	100	--
16...	--	--	49	56	67	81	100	--
16...	--	--	55	62	74	89	100	--
FEB								
24...	--	--	--	--	--	--	--	--
MAR								
16...	--	--	--	--	--	--	--	--
APR								
01...	--	--	--	--	--	--	--	--
MAY								
05...	--	--	--	--	--	--	--	--

11482120 REDWOOD CREEK ABOVE PANTHER CREEK NEAR ORICK, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	TEMPER-ATURE WATER (DEG C)	NUMBER OF SAM-PLING POINTS (COUNT)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	STREAM WIDTH (FT)	SEDI-MENT DIS-CHARGE, BEDLOAD (TONS/DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM
DEC								
02...	1245	12.0	22	4770	103	3390	1	3
10...	1400	12.0	21	6650	111	2750	2	5
JAN								
15...	1315	8.5	20	3040	97.0	2830	1	6
16...	1220	7.0	18	4060	103	2290	1	5

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 64.0 MM
DEC							
02...	6	12	24	41	63	88	100
10...	11	15	20	32	57	94	100
JAN							
15...	16	25	36	48	67	90	100
16...	11	24	39	60	84	98	100

REDWOOD CREEK BASIN

11482125 PANTHER CREEK NEAR ORICK, CA

LOCATION.--Lat 41°05'19", long 123°54'26", unsurveyed, Humboldt County, Hydrologic Unit 18010102, on right bank 300 ft upstream from mouth, 16 mi southeast of Orick.

DRAINAGE AREA.--6.07 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1979 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 400 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 1-31, Jan. 23 to Feb. 22, and Apr. 13-26. Records poor. No regulation or diversion above station.

AVERAGE DISCHARGE.--9 years, 26.4 ft^3/s, 19,130 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 839 ft^3/s, Feb. 17, 1986, gage height, 4.28 ft; minimum daily, 0.25 ft^3/s, Sept. 1-4, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 10	0145	*350	*3.18				

Minimum daily, 0.26 ft^3/s, Oct. 16-22, 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.29	.52	29	19	50	12	5.6	7.4	58	11	3.8	.88
2	.29	.80	83	18	43	9.4	5.5	6.9	38	11	3.2	.82
3	.29	.62	29	29	39	8.9	8.8	6.6	34	11	2.7	.89
4	.30	.55	44	27	34	10	7.1	6.4	29	11	2.6	.89
5	.31	.51	32	26	31	10	6.5	6.2	31	9.5	2.6	.70
6	.30	.46	51	24	29	10	6.2	6.2	33	8.6	2.6	.73
7	.29	.46	46	25	27	9.6	6.2	6.5	34	8.1	2.7	.75
8	.29	.55	49	34	26	9.0	6.1	6.5	31	7.9	2.8	.73
9	.30	1.7	62	66	25	9.2	5.9	6.2	34	7.7	2.6	.65
10	.31	.77	232	99	23	8.5	5.6	5.8	32	7.4	2.6	.65
11	.31	.65	112	114	21	8.1	5.4	5.5	29	7.3	2.6	.65
12	.31	.65	74	96	19	7.8	5.2	6.3	27	6.8	2.6	.65
13	.31	5.1	56	79	18	7.4	4.5	6.9	25	7.0	2.7	.65
14	.30	1.9	45	92	17	7.2	4.8	6.1	24	6.7	2.6	.65
15	.28	.87	40	138	16	6.9	4.5	5.8	23	6.5	2.0	.59
16	.26	2.0	35	171	15	6.3	4.3	9.2	21	6.7	1.9	.55
17	.26	2.2	30	131	14	6.0	4.1	8.2	19	6.4	1.7	.55
18	.26	1.6	26	105	14	6.2	3.8	7.6	18	6.4	1.5	.55
19	.26	.94	25	84	13	6.1	4.5	7.2	17	5.7	1.5	.64
20	.26	3.3	23	67	13	5.9	5.3	6.9	17	5.3	1.6	.89
21	.26	3.9	26	55	12	5.9	6.7	6.5	16	4.8	1.3	.75
22	.26	2.1	29	48	12	5.9	7.5	6.2	16	5.0	1.3	.68
23	.29	1.9	24	42	11	7.7	6.8	6.2	16	5.1	1.3	.73
24	.29	2.4	22	39	10	6.6	6.2	6.1	16	4.7	1.1	.79
25	.28	1.9	20	36	9.9	6.2	5.7	5.9	15	4.0	1.1	.72
26	.27	1.4	20	34	9.9	6.2	5.2	5.9	15	4.4	1.1	.78
27	.26	1.1	19	32	9.4	5.9	4.8	5.8	13	4.3	1.1	.77
28	.26	1.1	19	30	9.4	5.9	4.5	8.6	13	4.1	.92	.75
29	.28	.92	19	65	8.6	6.0	7.1	7.6	13	4.0	.89	.75
30	.31	2.4	21	70	---	5.9	7.8	6.8	12	3.9	.89	.68
31	.35	---	20	59	---	5.8	---	9.7	---	3.9	.89	---
TOTAL	8.89	45.27	1362	1954	579.2	232.5	172.2	209.7	719	206.2	60.79	21.46
MEAN	.29	1.51	43.9	63.0	20.0	7.50	5.74	6.76	24.0	6.65	1.96	.72
MAX	.35	5.1	232	171	50	12	8.8	9.7	58	11	3.8	.89
MIN	.26	.46	19	18	8.6	5.8	3.8	5.5	12	3.9	.89	.55
AC-FT	18	90	2700	3880	1150	461	342	416	1430	409	121	43

CAL YR 1987 TOTAL 6226.05 MEAN 17.1 MAX 232 MIN .25 AC-FT 12350
WTR YR 1988 TOTAL 5571.21 MEAN 15.2 MAX 232 MIN .26 AC-FT 11050

REDWOOD CREEK BASIN

11482125 PANTHER CREEK NEAR ORICK, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1979 to current year.
WATER TEMPERATURE: Water year 1980.
SEDIMENT DATA: Water years 1979 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: December 1979 to September 1980.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum recorded, 18.0 °C, July 29, 1980; minimum recorded, 5.0 °C, Jan. 29, 30, 1980.

REMARKS.--Zero-bedload discharge observed for flows less than 24 ft^3/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT						
23...	1130	0.29	12.0	1	0.00	--
NOV						
10...	1435	0.89	10.5	1	0.00	--
24...	1505	3.2	9.0	0	0.0	--
JAN						
06...	1230	24	8.0	15	0.97	--
15...	1440	119	10.0	122	39	41
16...	1225	169	8.0	258	118	38
16...	1340	174	7.0	221	104	43
FEB						
23...	1525	11	8.5	1	0.03	--
MAR						
16...	1345	6.9	8.5	2	0.04	--
APR						
01...	1310	5.9	9.5	2	0.03	--
MAY						
05...	1245	6.2	8.5	1	0.02	--

REDWOOD CREEK BASIN

11482130 COYOTE CREEK NEAR ORICK, CA

LOCATION.--Lat 41°07'03", long 123°54'34", unsurveyed, Humboldt County, Hydrologic Unit 18010102, on left bank 300 ft downstream from small left-bank tributary, 1,900 ft upstream from mouth, and 15 mi southeast of Orick.

DRAINAGE AREA.--7.78 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1979 to September 1982, October 1983 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 450 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 9, 1980, at datum 2.00 ft higher.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--8 years, 35.6 ft^3/s, 25,790 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,900 ft^3/s, Dec. 19, 1981, gage height, 5.98 ft; minimum daily, 0.10 ft^3/s, Sept. 23-25, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 650 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 2	0030	654	4.55	Dec. 10	0300	*1,460	*5.62

Minimum daily, 0.11 ft^3/s, Oct. 1-3, Sept. 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	.29	214	19	32	9.2	4.4	20	214	3.9	.60	.17
2	.11	.34	362	17	26	6.4	4.0	15	88	3.8	.52	.16
3	.11	.26	96	94	21	5.8	7.8	14	67	3.6	.46	.16
4	.12	.25	190	72	20	7.2	7.3	12	45	3.3	.46	.16
5	.13	.25	99	49	17	9.3	6.0	11	66	2.7	.48	.15
6	.14	.25	225	37	15	9.1	5.6	11	59	2.8	.49	.14
7	.15	.23	140	53	14	9.2	5.6	15	54	2.3	.48	.14
8	.15	.28	137	112	14	8.4	5.1	14	44	2.0	.45	.14
9	.17	.76	261	182	13	15	4.8	11	65	2.0	.40	.14
10	.19	.56	565	211	11	12	4.3	10	57	2.0	.38	.14
11	.19	.47	153	186	10	11	4.1	9.0	41	1.8	.37	.13
12	.19	.46	85	118	9.4	8.9	3.9	11	32	1.8	.41	.12
13	.21	4.9	54	121	8.6	7.7	3.8	16	26	1.8	.46	.11
14	.19	2.8	38	178	8.2	6.9	4.1	11	21	1.8	.43	.11
15	.15	1.7	32	221	7.5	6.6	3.9	9.9	17	1.6	.42	.12
16	.13	2.4	33	238	7.3	6.2	3.6	27	15	1.7	.41	.13
17	.12	2.6	25	126	6.9	5.9	3.5	22	13	1.5	.38	.13
18	.12	2.0	20	85	6.3	5.4	3.4	16	11	1.4	.33	.13
19	.12	1.5	17	63	6.0	5.2	5.8	13	9.8	1.3	.30	.16
20	.12	5.8	14	49	5.6	5.0	7.9	12	8.7	1.1	.28	.20
21	.12	8.6	28	41	5.3	4.9	10	10	8.1	1.1	.26	.18
22	.13	3.9	50	36	5.1	4.7	15	8.6	7.5	.88	.25	.16
23	.25	3.1	36	32	5.1	13	13	8.3	6.8	.84	.25	.15
24	.23	3.4	27	27	5.2	8.1	9.8	7.5	6.2	.80	.24	.15
25	.18	3.5	22	22	5.1	6.8	8.5	7.2	5.7	.80	.23	.15
26	.14	2.6	19	20	5.0	6.4	7.5	6.8	5.2	.85	.23	.15
27	.15	2.0	16	18	5.1	6.3	7.3	6.5	5.0	.80	.22	.15
28	.14	1.7	16	16	4.9	5.6	6.8	14	4.8	.74	.20	.15
29	.16	1.5	17	38	4.7	5.3	18	12	4.3	.71	.19	.14
30	.18	5.0	22	39	---	5.0	25	7.6	4.1	.66	.19	.13
31	.20	---	24	35	---	4.7	---	14	---	.63	.18	---
TOTAL	4.80	63.40	3037	2555	304.3	231.2	219.8	382.4	1011.2	53.01	10.95	4.35
MEAN	.15	2.11	98.0	82.4	10.5	7.46	7.33	12.3	33.7	1.71	.35	.15
MAX	.25	8.6	565	238	32	15	25	27	214	3.9	.60	.20
MIN	.11	.23	14	16	4.7	4.7	3.4	6.5	4.1	.63	.18	.11
AC-FT	9.5	126	6020	5070	604	459	436	758	2010	105	22	8.6

CAL YR 1987 TOTAL 9359.50 MEAN 25.6 MAX 565 MIN .11 AC-FT 18560
WTR YR 1988 TOTAL 7877.41 MEAN 21.5 MAX 565 MIN .11 AC-FT 15620

11482130 COYOTE CREEK NEAR ORICK, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1979-83, October 1984 to current year.
WATER TEMPERATURE: December 1979 to September 1980.
SEDIMENT DATA: November 1979-83, October 1984 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: December 1979 to September 1980.

REMARKS.--Prior to October 1975, published in U.S. Geological Survey Open-File Report 76-678, "Redwood National Park Studies." Zero bedload observed for flows less than 25 ft^3/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
OCT											
14...	1320	0.19	13.0	4	0.00	--	--	--	--	--	--
NOV											
10...	1215	0.56	12.0	2	0.00	--	--	--	--	--	--
12...	1415	0.46	12.0	0	0.0	--	--	--	--	--	--
25...	1010	3.6	8.0	0	0.0	--	--	--	--	--	--
DEC											
04...	1220	197	11.5	135	72	71	77	83	88	94	100
17...	1240	25	8.0	6	0.40	--	--	--	--	--	--
JAN											
15...	1200	187	8.0	79	40	68	--	--	--	--	--
15...	1315	178	8.0	93	45	56	--	--	--	--	--
FEB											
23...	1205	5.1	9.0	1	0.01	--	--	--	--	--	--
MAR											
16...	1115	6.3	8.0	2	0.03	--	--	--	--	--	--
APR											
01...	1410	4.5	14.0	5	0.06	--	--	--	--	--	--
MAY											
05...	1045	10	9.5	2	0.05	--	--	--	--	--	--

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	TEMPERATURE WATER (DEG C)	NUMBER OF SAMPLING POINTS (COUNT)	STREAMFLOW, INSTANTANEOUS (CFS)	STREAM WIDTH (FT)	SEDIMENT DISCHARGE, BEDLOAD (TONS/ DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM
DEC							
04...	1235	11.5	10	202	23.0	15	2

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM
DEC						
04...	11	22	35	54	80	100

11482468 LITTLE LOST MAN CREEK AT SITE NO. 2, NEAR ORICK, CA

LOCATION.--Lat 41°19'20", long 124°01'10", in NE 1/4 SE 1/4 sec.23, T.11 N., R.1 E., Humboldt County, Hydrologic Unit 18010102, Redwood National Park, on right bank 0.8 mi upstream from mouth, and 3.2 mi northeast of Orick.

DRAINAGE AREA.--3.46 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1974 to September 1982, October 1984 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 50 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Jan. 10-13. Records good above 1.0 ft^3/s and fair below. No regulation or diversion above station.

AVERAGE DISCHARGE.--12 years, 10.1 ft^3/s, 7,320 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 808 ft^3/s, Mar. 18, 1975, gage height, 4.32 ft; minimum daily, 0.10 ft^3/s, Dec. 19-26, 28, 1976, Feb. 19, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 6	1015	131	2.62	June 1	1330	149	2.71
Dec. 10	0445	*301	*3.28				

Minimum daily, 0.13 ft^3/s, Oct. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.13	1.6	13	11	13	4.7	1.2	8.2	98	2.4	.76	.37
2	.13	1.5	70	9.1	12	2.7	1.2	7.5	64	2.3	.69	.34
3	.14	.46	39	9.1	10	2.4	2.7	6.6	51	2.2	.69	.33
4	.14	.26	71	8.2	9.2	3.0	2.6	5.8	34	2.2	.69	.33
5	.14	.22	47	7.2	8.1	4.1	2.3	5.1	25	2.1	.78	.33
6	.15	.22	90	6.2	7.3	3.9	2.1	4.5	19	1.9	.77	.33
7	.15	.22	81	6.5	6.6	4.0	2.1	5.0	13	1.8	.76	.31
8	.15	.37	70	11	6.1	3.8	1.9	4.3	11	1.7	.76	.30
9	.15	1.0	58	33	5.8	4.0	1.6	3.9	22	1.6	.76	.30
10	.16	.46	178	56	5.4	3.8	1.4	3.4	27	1.7	.69	.30
11	.16	.27	74	45	4.8	3.4	1.2	3.0	20	1.6	.69	.29
12	.16	.28	42	43	4.7	3.2	1.2	2.9	15	1.5	.69	.27
13	.17	6.4	24	34	4.3	2.9	1.1	3.0	12	1.5	.69	.26
14	.17	2.5	16	36	3.9	2.8	1.1	2.7	10	1.5	.69	.25
15	.17	1.2	13	74	3.5	2.6	1.1	2.5	8.7	1.5	.69	.25
16	.17	1.4	14	76	3.4	2.3	1.1	7.8	7.6	1.4	.69	.25
17	.17	1.7	11	59	3.2	2.1	1.1	7.9	6.7	1.4	.69	.25
18	.17	1.5	10	40	2.9	1.9	.98	6.4	6.0	1.3	.63	.24
19	.17	1.2	8.7	26	2.7	1.9	2.9	5.7	5.5	1.2	.59	.25
20	.17	6.8	7.5	19	2.5	1.7	6.1	4.9	5.1	1.1	.56	.28
21	.17	6.2	8.5	15	2.4	1.6	9.2	4.1	4.5	1.1	.51	.29
22	.17	2.3	14	12	2.4	1.5	15	3.5	4.2	1.1	.51	.27
23	.18	1.5	11	10	2.4	2.9	12	3.2	4.0	.98	.48	.25
24	.19	1.3	9.4	8.9	2.2	2.0	9.0	2.9	3.7	.98	.46	.24
25	.21	1.6	8.3	7.8	2.1	1.8	7.4	2.5	3.3	.91	.45	.23
26	.21	1.2	7.2	7.1	2.0	1.7	6.0	2.3	3.3	.91	.42	.23
27	.21	.94	6.5	6.3	1.9	1.9	5.1	2.1	3.1	.84	.41	.22
28	.21	.79	7.1	5.6	1.8	1.6	4.4	5.5	2.8	.84	.41	.22
29	.21	.70	6.9	13	1.7	1.4	5.6	5.3	2.6	.84	.39	.22
30	.21	1.4	11	19	---	1.3	7.8	4.5	2.5	.83	.37	.22
31	.21	---	13	15	---	1.3	---	6.0	---	.76	.37	---
TOTAL	5.30	47.49	1040.1	729.0	138.3	80.2	118.48	143.0	494.6	43.99	18.74	8.22
MEAN	.17	1.58	33.6	23.5	4.77	2.59	3.95	4.61	16.5	1.42	.60	.27
MAX	.21	6.8	178	76	13	4.7	15	8.2	98	2.4	.78	.37
MIN	.13	.22	6.5	5.6	1.7	1.3	.98	2.1	2.5	.76	.37	.22
AC-FT	11	94	2060	1450	274	159	235	284	981	87	37	16

CAL YR 1987 TOTAL 3281.77 MEAN 8.99 MAX 178 MIN .13 AC-FT 6510
WTR YR 1988 TOTAL 2867.42 MEAN 7.83 MAX 178 MIN .13 AC-FT 5690

11482468 LITTLE LOST MAN CREEK AT SITE NO. 2, NEAR ORICK, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974-82, October 1984 to current year.
CHEMICAL DATA: Water years 1974-77.
SEDIMENT DATA: Water years 1974-76, 1978-82, October 1984 to current year.

REMARKS.--Prior to October 1975, published in U.S. Geological Survey Open-File Report 76-678, "Redwood National Park Studies." Zero bedload discharge observed for flows less than 16 ft^3/s.

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
NOV					
04...	1200	0.25	11.0	0	0.0
13...	1315	8.0	11.5	10	0.22
DEC					
14...	1230	16	9.0	2	0.09
JAN					
13...	1310	34	10.0	8	0.73
FEB					
19...	1120	2.6	--	2	0.01
MAR					
17...	1235	2.1	8.5	1	0.01
MAY					
02...	1300	7.4	8.5	1	0.02

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	NUMBER OF SAM-PLING POINTS (COUNT)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
OCT												
09...	1200	8	0.15	1	3	10	19	26	32	39	68	100

11482500 REDWOOD CREEK AT ORICK, CA

LOCATION.--Lat 41°17'58", long 124°03'00", in NE 1/4 NE 1/4 sec.34, T.11 N., R.1 E., Humboldt County, Hydrologic Unit 18010102, on right bank on U.S. Highway 101, 0.8 mi north of Orick, 300 ft downstream from Prairie Creek, and 3.7 mi upstream from mouth.
DRAINAGE AREA.--277 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1911 to September 1913, October 1953 to current year. Monthly discharge only for some periods, published in WSP 1315-B.
REVISED RECORDS.--WSP 1315-B: 1912-13.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 5.16 ft above National Geodetic Vertical Datum of 1929. Sept. 10, 1911, to Aug. 9, 1913, nonrecording gage at different datum. October 1953 to April 16, 1987, at site 0.9 mi downstream at same datum. May 7, 1987, to Aug. 3, 1987, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--37 years, 1,053 ft^3/s, 762,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,500 ft^3/s, Dec. 22, 1964, gage height, 24.0 ft, former site, from outside high-water marks; minimum daily, 2.1 ft^3/s, Oct. 20-22, 1987.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 18, 1953, reached a stage of 23.95 ft, former site, from floodmarks, discharge, 50,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 2	0530	9,480	18.68	Dec. 10	1015	*15,200	*21.07

Minimum daily, 2.1 ft^3/s, Oct. 20-22.

REVISIONS.--Peak discharge for Jan. 16, 1986 (2130 hours) is 12,400 ft^3/s, gage height, 14.76 ft; this peak was inadvertently omitted in the report for 1986.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	21	940	743	1000	414	210	490	3700	224	71	26
2	3.6	51	7940	696	915	371	205	422	2750	223	68	25
3	3.8	31	2980	1260	814	326	259	391	1760	217	66	25
4	4.2	19	3310	1400	740	324	286	365	1290	213	65	25
5	4.2	16	2190	1120	688	384	248	347	1180	204	64	25
6	3.8	13	4710	958	649	372	227	326	1290	196	62	25
7	3.3	12	4300	941	615	366	222	386	1270	187	62	24
8	3.1	11	3290	1400	604	344	215	427	1030	179	62	22
9	3.0	31	3060	2770	598	362	203	408	1190	171	60	22
10	2.8	32	11700	4380	583	367	194	368	1190	164	57	21
11	2.8	25	5230	6140	553	340	187	335	959	150	55	20
12	2.8	21	2680	4250	528	317	178	314	856	149	52	18
13	2.6	115	1780	3270	510	301	174	381	733	147	51	17
14	2.6	143	1400	3680	486	287	175	338	643	146	51	16
15	2.6	92	1260	6840	463	278	176	306	582	142	50	16
16	2.5	74	1210	7030	448	266	174	418	532	135	50	16
17	2.3	82	1040	4680	425	251	171	538	498	131	51	15
18	2.3	85	900	3130	409	241	167	437	460	127	49	14
19	2.3	69	801	2370	391	232	205	387	426	122	46	15
20	2.1	132	731	1900	376	224	275	351	402	113	44	20
21	2.1	221	793	1650	362	224	315	317	376	107	43	21
22	2.1	164	1110	1490	353	224	412	286	351	103	40	20
23	2.3	123	1080	1350	346	294	419	273	338	98	38	20
24	2.7	97	892	1240	337	351	355	258	315	92	38	19
25	2.8	104	798	1150	327	290	313	244	297	90	35	18
26	2.8	99	735	1070	320	266	283	229	286	87	35	17
27	2.8	85	684	963	313	261	261	220	273	83	34	16
28	2.8	70	695	889	303	247	245	298	262	82	33	16
29	2.8	60	730	1060	305	234	312	379	249	79	31	16
30	3.1	74	768	1460	---	225	452	306	229	75	28	16
31	3.7	---	840	1150	---	214	---	287	---	73	28	---
TOTAL	90.3	2172	70577	72430	14766	9197	7518	10832	25717	4309	1519	586
MEAN	2.91	72.4	2277	2336	509	297	251	349	857	139	49.0	19.5
MAX	4.2	221	11700	7030	1000	414	452	538	3700	224	71	26
MIN	2.1	11	684	696	305	214	167	220	229	73	28	14
AC-FT	179	4310	140000	143700	29290	18240	14910	21490	51010	8550	3010	1160

CAL YR 1987 TOTAL 252163.6 MEAN 691 MAX 11700 MIN 2.1 AC-FT 500200
WTR YR 1988 TOTAL 219713.3 MEAN 600 MAX 11700 MIN 2.1 AC-FT 435800

REDWOOD CREEK BASIN

11482500 REDWOOD CREEK AT ORICK, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1955-56, 1959 to current year.
CHEMICAL DATA: Water years 1959-66, 1973-81.
WATER TEMPERATURE: Water years 1966 to current year.
SEDIMENT DATA: Water years 1955-56, 1970 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1965 to September 1981, October 1981 to current year (storm season only).
SUSPENDED-SEDIMENT DISCHARGE: March 1970 to September 1981, October 1981 to current year (storm season only).

REMARKS.--Sediment samples were collected on most days where a water temperature is published.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATION: Maximum daily mean, 9,610 mg/L, Mar. 18, 1975; minimum daily mean, 0 mg/L, Nov. 10-12, 1986, Apr. 20, 29, 30, 1987.
SEDIMENT LOAD: Maximum daily, 1,070,000 tons, Mar. 18, 1975; minimum daily, 0 ton, Nov. 10-12, 1986, Apr. 20, 29, 30, 1987.

EXTREMES FOR CURRENT YEAR (storm season only).--
SEDIMENT CONCENTRATION: Maximum daily mean, 1,600 mg/L, Dec. 10; minimum daily mean, 1 mg/L, on many days.
SEDIMENT LOAD: Maximum daily, 54,800 tons, Dec. 10; minimum daily, 0.01 ton, on many days.

WATER TEMPERATURE, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR
1	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---
4	---	11.0	---	---	---	---	---
5	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---
7	---	---	11.0	---	---	---	---
8	---	---	---	---	10.0	---	---
9	---	---	---	---	---	---	---
10	---	---	11.5	---	---	---	---
11	---	---	9.5	---	---	---	---
12	---	13.5	---	9.0	---		
13	---	13.0	---	---	---	---	---
14	12.0	---	---	---	---	---	---
15	---	---	---	8.5	---	---	12.5
16	---	---	---	---	---	---	---
17	---	---	---	---	---	9.0	---
18	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---
21	---	---	9.5	---	---	---	---
22	---	---	---	8.5	---	---	---
23	---	12.0	---	---	---	---	---
24	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---
26	---	---	---	---	---	---	13.5
27	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---

11482500 REDWOOD CREEK AT ORICK, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	3.6	1	.01	21	11	.94	940	108	537
2	3.6	1	.01	51	223	21	7940	693	15400
3	3.8	1	.01	31	3	.25	2980	340	2740
4	4.2	1	.01	19	2	.10	3310	271	2810
5	4.2	1	.01	16	2	.09	2190	245	1450
6	3.8	1	.01	13	1	.04	4710	323	5930
7	3.3	1	.01	12	1	.03	4300	300	3480
8	3.1	1	.01	11	1	.03	3290	258	2380
9	3.0	1	.01	31	2	.17	3060	170	1400
10	2.8	1	.01	32	2	.17	11700	1600	54800
11	2.8	1	.01	25	2	.13	5230	480	6780
12	2.8	1	.01	21	2	.11	2680	160	1160
13	2.6	1	.01	115	27	9.7	1780	75	360
14	2.6	1	.01	143	15	5.8	1400	50	189
15	2.6	1	.01	92	5	1.2	1260	40	136
16	2.5	1	.01	74	2	.40	1210	20	65
17	2.3	1	.01	82	2	.44	1040	15	42
18	2.3	1	.01	85	1	.23	900	12	29
19	2.3	1	.01	69	1	.19	801	10	22
20	2.1	1	.01	132	12	7.1	731	9	18
21	2.1	1	.01	221	8	4.8	793	11	24
22	2.1	1	.01	164	3	1.3	1110	13	39
23	2.3	1	.01	123	2	.66	1080	12	35
24	2.7	1	.01	97	2	.52	892	10	24
25	2.8	1	.01	104	2	.56	798	8	17
26	2.8	1	.01	99	1	.27	735	6	12
27	2.8	1	.01	85	1	.23	684	5	9.2
28	2.8	1	.01	70	1	.19	695	7	13
29	2.8	1	.01	60	1	.16	730	5	9.9
30	3.1	1	.01	74	10	2.0	768	6	12
31	3.7	1	.01	---	---	---	840	7	16
TOTAL	90.3	---	0.31	2172	---	58.81	70577	---	99939.1
DAY		JANUARY			FEBRUARY			MARCH	
1	743	5	10	1000	9	24	414	4	4.5
2	696	4	7.5	915	8	20	371	2	2.0
3	1260	60	265	814	8	18	326	2	1.8
4	1400	40	151	740	7	14	324	2	1.7
5	1120	17	51	688	8	15	384	3	3.1
6	958	6	16	649	8	14	372	3	3.0
7	941	15	38	615	9	15	366	2	2.0
8	1400	25	94	604	9	15	344	2	1.9
9	2770	154	1610	598	8	13	362	2	2.0
10	4380	200	2630	583	8	13	367	2	2.0
11	6140	460	7630	553	8	12	340	2	1.8
12	4250	360	4130	528	7	10	317	2	1.7
13	3270	200	1770	510	7	9.6	301	2	1.6
14	3680	211	2200	486	7	9.2	287	2	1.5
15	6840	655	12600	463	6	7.5	278	2	1.5
16	7030	598	11600	448	6	7.3	266	2	1.4
17	4680	395	4990	425	5	5.7	251	2	1.4
18	3130	283	2390	409	5	5.5	241	2	1.3
19	2370	212	1360	391	4	4.2	232	2	1.3
20	1900	172	882	376	4	4.1	224	1	.60
21	1650	125	557	362	4	3.9	224	1	.60
22	1490	86	346	353	3	2.9	224	1	.60
23	1350	61	222	346	3	2.8	294	2	1.6
24	1240	47	157	337	3	2.7	351	2	1.9
25	1150	36	112	327	3	2.6	290	2	1.6
26	1070	27	78	320	2	1.7	266	1	.72
27	963	21	55	313	2	1.7	261	1	.70
28	889	16	38	308	2	1.7	247	1	.67
29	1060	18	52	305	2	1.6	234	1	.63
30	1460	21	83	---	---	---	225	1	.61
31	1150	12	37	---	---	---	214	1	.58
TOTAL	72430	---	56161.5	14766	---	257.7	9197	---	48.31

11482500 REDWOOD CREEK AT ORICK, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL	
1	210	1	.57
2	205	1	.55
3	259	2	1.4
4	286	2	1.5
5	248	1	.67
6	227	1	.61
7	222	1	.60
8	215	1	.58
9	203	1	.55
10	194	1	.52
11	187	2	1.0
12	178	2	.96
13	174	2	.94
14	175	2	.94
15	176	2	.95
16	174	2	.94
17	171	2	.92
18	167	2	.90
19	205	3	1.7
20	275	3	2.2
21	315	3	2.6
22	412	3	3.3
23	419	2	2.3
24	355	2	1.9
25	313	3	2.5
26	283	3	2.3
27	261	3	2.1
28	245	2	1.3
29	312	4	3.4
30	452	6	7.3
31	---	---	---
TOTAL	7518	---	48.00
PERIOD	176750.3		156513.73

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1987	90.30	0.31	0	0
NOVEMBER	2172.00	58.81	8	67
DECEMBER	70577.00	99939.10	27800	128000
JANUARY 1988	72430.00	56161.50	27700	83900
FEBRUARY	14766.00	257.70	4110	4370
MARCH	9197.00	48.31	1690	1740
APRIL	7518.00	48.00	947	995
PERIOD	176750.30	156513.73	62255	219072

11482500 REDWOOD CREEK AT ORICK, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
DEC								
10...	1210	14900	11.5	2470	99400	15	22	30
10...	1530	13000	11.5	1750	61400	19	24	33
11...	1130	5060	9.0	422	5770	--	--	--
11...	1330	4680	9.5	361	4560	--	--	--
JAN								
12...	1240	4090	9.0	259	2860	--	--	--
15...	1130	7030	--	724	13700	19	24	32
15...	1440	6220	8.0	574	9640	--	--	--
22...	1220	1530	8.5	128	529	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
DEC								
10...	42	53	61	71	83	92	97	100
10...	46	58	67	78	90	97	99	100
11...	--	--	69	77	88	95	100	--
11...	--	--	74	82	92	98	100	--
JAN								
12...	--	--	47	53	62	78	90	100
15...	45	56	64	73	88	97	99	100
15...	--	--	61	70	83	92	95	100
22...	--	--	41	46	57	80	82	100

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	TEMPER-ATURE WATER (DEG C)	NUMBER OF SAM-PLING POINTS (COUNT)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	STREAM WIDTH (FT)	SEDI-MENT DIS-CHARGE, BEDLOAD (TONS/DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM
DEC								
07...	1430	11.0	20	3760	189	1560	1	5
10...	1610	11.5	20	12500	302	1760	4	15
11...	1215	9.0	20	4300	230	3630	1	3
11...	1410	9.5	20	4000	230	2760	--	1
21...	1300	9.5	14	783	129	132	1	12
JAN								
12...	1315	9.0	21	4070	220	1230	2	9
15...	1215	8.5	19	6840	241	2480	2	15
15...	1515	8.0	21	6090	233	2180	1	8
22...	1255	8.5	22	1530	180	200	1	5
FEB								
08...	1300	10.0	24	612	122	166	1	10
19...	1450	9.0	24	389	116	30	1	13

11482500 REDWOOD CREEK AT ORICK, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 64.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 76.0 MM
DEC								
07...	21	38	58	78	92	99	100	--
10...	27	36	46	61	80	100	--	--
11...	9	20	45	73	92	100	--	--
11...	4	13	28	54	77	93	98	100
21...	30	47	67	89	99	100	--	--
JAN								
12...	17	29	48	71	90	100	--	--
15...	34	47	58	69	87	100	--	--
15...	20	33	51	70	87	97	100	--
22...	6	7	17	45	89	100	--	--
FEB								
08...	37	67	88	97	99	100	--	--
19...	43	65	84	97	100	--	--	--

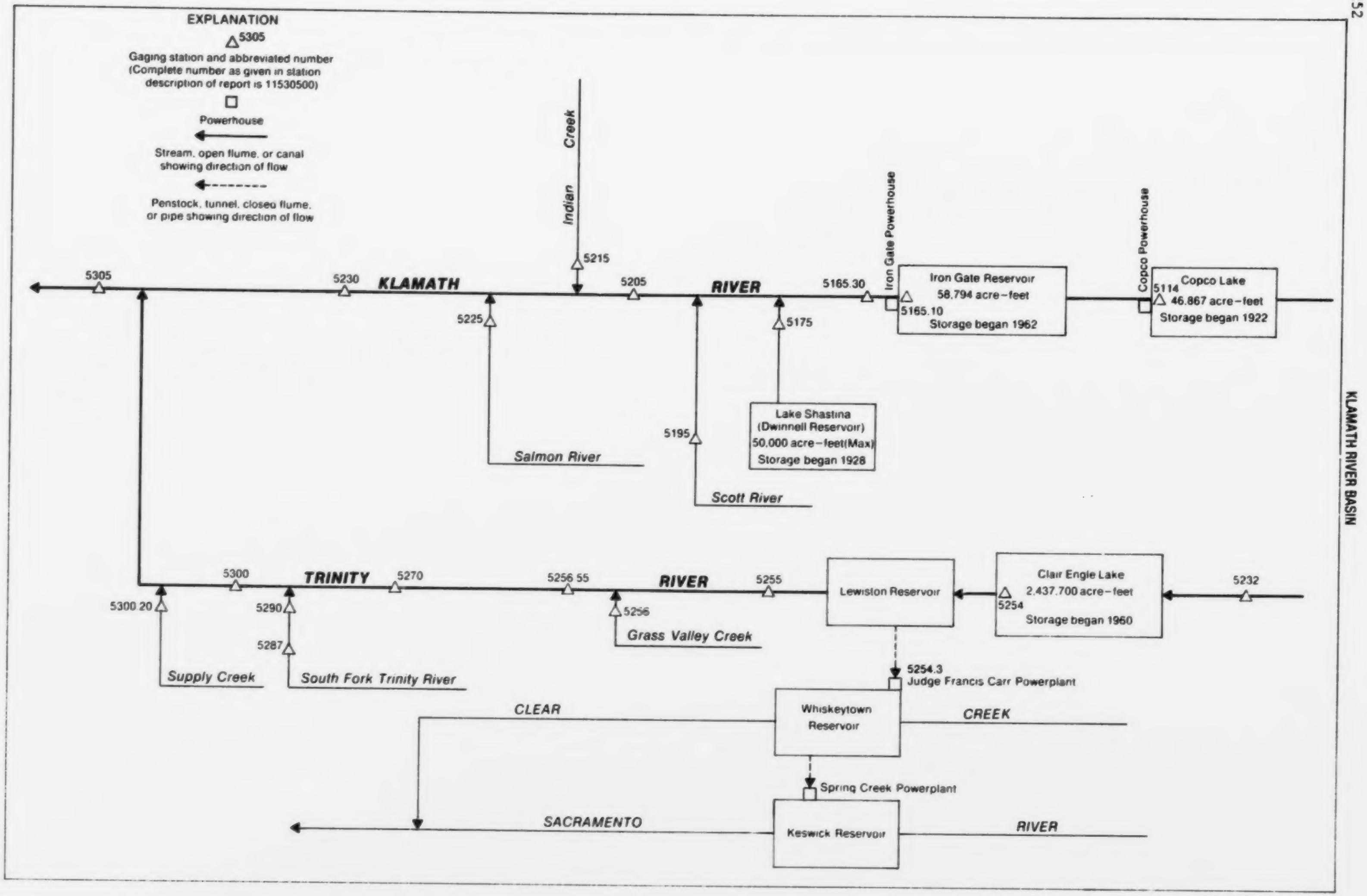

EXPLANATION
5305
Gaging station and abbreviated number (Complete number as given in station description of report is 11530500)
Powerhouse
Stream, open flume, or canal showing direction of flow
Penstock, tunnel, closed flume, or pipe showing direction of flow
Indian Creek
5215
KLAMATH
RIVER
5305
5230
5205
5165.30
5225
5175
5195
Iron Gate Powerhouse
Iron Gate Reservoir
58,794 acre-feet
5165.10
Storage began 1962
Copco Powerhouse
5114
Copco Lake
46,867 acre-feet
Storage began 1922
Lake Shastina (Dwinnell Reservoir)
50,000 acre-feet(Max)
Storage began 1928
Salmon River
Scott River
TRINITY
RIVER
5300
5270
5256.55
5255
5300.20
5290
5287
5256
Lewiston Reservoir
Clair Engle Lake
2,437,700 acre-feet
5254
Storage began 1960
5232
Supply Creek
South Fork Trinity River
Grass Valley Creek
5254.3
Judge Francis Carr Powerplant
Whiskeytown Reservoir
CLEAR
CREEK
Spring Creek Powerplant
SACRAMENTO
Keswick Reservoir
RIVER

Figure 23. - Schematic diagram showing diversions and storage in Klamath River and Trinity River basins.

RESERVOIRS IN KLAMATH RIVER BASIN, CA

11511400 COPCO LAKE NEAR COPCO.--Lat 41°58'46", long 122°20'00", in SE 1/4 SW 1/4 sec.29, T.48 N., R.4 W., Siskiyou County, Hydrologic Unit 18010206, 12.7 mi northeast of Hornbrook. DRAINAGE AREA, 4,300 mi^2. PERIOD OF RECORD, October 1967 to current year (monthend contents only). GAGE, pressure device and telemark read once daily. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pacific Power and Light Co.). Monthend contents computed from capacity table dated Aug. 25, 1964 provided by Pacific Power and Light Co.

REMARKS.--Lake is formed by gravity-type dam completed in 1922. Usable capacity, 17,107 acre-ft between elevations 2,607.5 ft, top of tainter gates, and 2,588.5 ft, invert to powerplant intake. Dead storage 29,760 acre-ft below elevation 2,588.5 ft. Figures given herein represent total contents at 0800 hours. Lake is used for power generation.

COOPERATION.--Records were provided by Pacific Power and Light Co. in connection with a Federal Regulation Commission project.

EXTREMES (at 0800) FOR PERIOD OF RECORD.--Maximum contents, 46,818 acre-ft, June 24, 1969, elevation, 2,607.45 ft; minimum since first filling, 30,360 acre-ft, Aug. 19, 1971, elevation, 2,589.24 ft.

EXTREMES (at 0800) FOR CURRENT YEAR.--Maximum contents, 46,461 acre-ft, June 12, elevation, 2,607.09 ft; minimum, 40,512 acre-ft, Dec. 31, elevation, 2,600.87 ft.

11516510 IRON GATE RESERVOIR NEAR HORNBROOK.--Lat 41°55'58", long 122°26'06", in SW 1/4 SW 1/4 sec.9, T.47 N., R.5 W., Siskiyou County, Hydrologic Unit 18010206, 6.6 mi northeast of Hornbrook. DRAINAGE AREA, 4,573 mi^2. PERIOD OF RECORD, October 1967 to current year (monthend contents only). GAGE, pressure device and telemark read once daily. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pacific Power and Light Co.). Monthend contents computed from capacity table dated Feb. 15, 1960, provided by Pacific Power and Light Co.

REMARKS.--Reservoir is formed by earth and rockfill dam completed in 1962. Usable capacity, 58,387 acre-ft, between elevations 2,328.0 ft, crest of spillway, and 2,184.75 ft, invert to diversion tunnel. Dead storage 407 acre-ft. Normal operating pool is from elevations 2,305.0 ft, capacity, 39,963 acre-ft, to 2,328.0 ft, capacity, 58,794 acre-ft. Figures herein represent total contents at 0800 hours. Reservoir is used for power generation and recreation.

COOPERATION.--Records were provided by Pacific Power and Light Co. in connection with a Federal Regulatory Commission project.

EXTREMES (at 0800) FOR PERIOD OF RECORD.--Maximum contents, 61,776 acre-ft, Mar. 3, 1972, elevation, 2,330.96 ft; minimum since first filling, 50,103 acre-ft, Dec. 9, 1968, elevation, 2,318.40 ft.

EXTREMES (at 0800) FOR CURRENT YEAR.--Maximum contents, 59,269 acre-ft, Feb. 28, elevation, 2,328.48 ft; minimum, 56,022 acre-ft, Dec. 26, elevation, 2,325.10 ft.

MONTHEND ELEVATION NGVD AND CONTENTS AT 0800, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
	11511400 COPCO LAKE			11516510 IRON GATE RESERVOIR		
Sept. 30	2604.75	44179	--	2326.58	57420	--
Oct. 31	2605.29	44700	+521	2326.47	57316	-104
Nov. 30	2604.07	43525	-1175	2326.20	57058	-258
Dec. 31	2600.87	40512	-3013	2326.83	57660	+602
CAL YR 1987	--	--	-4460	--	--	-142
Jan. 31	2603.95	43411	+2899	2326.75	57584	-76
Feb. 29	2603.00	42507	-904	2328.46	59249	+1665
Mar. 31	2603.66	43135	+628	2326.72	57555	-1694
Apr. 30	2605.29	44700	+1565	2327.13	57948	+393
May 31	2605.77	45167	+467	2327.37	58182	+234
June 30	2604.29	43736	-1431	2327.65	58454	+272
July 31	2605.33	44739	+1003	2326.86	57688	-766
Aug. 31	2605.41	44818	+79	2326.57	57411	-277
Sept. 30	2604.30	43746	-1072	2326.41	57259	-152
WTR YR 1988	--	--	-433	--	--	-161

11516530 KLAMATH RIVER BELOW IRON GATE DAM, CA

LOCATION.--Lat 41°55'41", long 122°26'35", in SE 1/4 NE 1/4 sec.17, T.47 N., R.5 W., Siskiyou County, Hydrologic Unit 18010206, on left bank 0.1 mi downstream from Bogus Creek, 0.6 mi downstream from Iron Gate Dam, and 5.9 mi northeast of Hornbrook.

DRAINAGE AREA.--4,630 mi^2, approximately (not including Lost River and Lower Klamath Lake basins).

PERIOD OF RECORD.--October 1960 to current year.
CHEMICAL DATA: Water years 1962-81.
WATER TEMPERATURE: Water years 1963-80.

GAGE.--Water-stage recorder. Datum of gage is 2,162.44 ft above National Geodetic Vertical Datum of 1929 (levels by Pacific Power & Light Co.).

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Upper Klamath Lake, capacity, 523,700 acre-ft; Iron Gate Reservoir (station 11516510), other smaller reservoirs, and diversions above station.

AVERAGE DISCHARGE.--28 years, 2,246 ft^3/s, 1,627,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,400 ft^3/s, Dec. 22, 1964, gage height, 13.63 ft, from rating curve extended above 15,000 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 539 ft^3/s, July 7, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,890 ft^3/s, Feb. 28, gage height, 5.09 ft; minimum daily, 539 ft^3/s, July 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1340	1330	1340	1340	1790	2520	1330	1020	809	719	747	1030
2	1350	1340	1340	1340	1780	2490	1330	1020	912	722	772	1030
3	1350	1330	1330	1340	1780	2490	1340	1020	874	719	792	1030
4	1350	1330	1330	1340	1780	2490	1330	1020	802	719	819	1030
5	1350	1330	1330	1340	1780	2630	1320	1020	852	720	854	1030
6	1350	1330	1330	1340	1780	2630	1330	1020	904	613	884	1030
7	1340	1330	1320	1340	1780	2400	1320	1020	1050	539	922	1030
8	1340	1330	1330	1340	1780	2280	1330	1030	1110	540	971	1030
9	1340	1330	1330	1360	1780	2300	1340	1030	1110	552	1000	1030
10	1340	1330	1390	1390	1780	2290	1330	1040	1110	552	1010	1030
11	1340	1330	1330	1800	1910	2280	1330	1020	1070	553	1020	1030
12	1340	1330	1320	1790	2080	2270	1330	1030	1020	555	1010	1030
13	1340	1330	1320	1790	2060	2240	1320	1030	875	556	1020	1030
14	1340	1330	1320	1800	2050	2260	1330	1030	732	557	1020	1030
15	1340	1330	1320	1870	2050	2220	1020	1030	736	551	1020	1030
16	1340	1330	1400	2200	2280	1940	1010	1030	741	553	1020	1030
17	1340	1330	1790	2200	2390	1760	1020	1030	748	549	1020	1040
18	1340	1330	1790	2180	2570	1650	1020	1030	756	549	1030	1040
19	1340	1330	1790	2100	2440	1330	1020	1030	753	556	1020	1040
20	1340	1320	1790	1790	2390	1330	1020	1030	731	552	1020	1040
21	1340	1330	1780	1430	2410	1330	1030	1030	707	551	1020	1040
22	1340	1320	1780	1570	2470	1340	1030	1030	710	597	1020	1050
23	1340	1320	1780	1790	2690	1340	1020	1030	711	714	1020	1070
24	1340	1380	1780	1780	2690	1340	1020	1030	718	729	1020	1050
25	1340	1330	1780	1780	2720	1510	1020	1020	724	730	1020	1050
26	1340	1330	1770	1780	2850	1760	1020	754	718	728	1020	1050
27	1340	1330	1770	1790	2870	1760	1020	741	717	728	1030	1050
28	1340	1330	1700	1820	2830	1570	1020	754	716	732	1020	1050
29	1340	1330	1470	1810	2720	1310	1020	752	719	731	1020	1050
30	1330	1330	1480	1800	---	1320	1020	748	720	732	1020	1040
31	1330	---	1390	1790	---	1320	---	752	---	729	1020	---
TOTAL	41570	39930	47020	52130	64280	59700	34940	30171	24855	19627	30201	31140
MEAN	1341	1331	1517	1682	2217	1926	1165	973	829	633	974	1038
MAX	1350	1380	1790	2200	2870	2630	1340	1040	1110	732	1030	1070
MIN	1330	1320	1320	1340	1780	1310	1010	741	707	539	747	1030
AC-FT	82450	79200	93260	103400	127500	118400	69300	59840	49300	38930	59900	61770

CAL YR 1987 TOTAL 530399 MEAN 1453 MAX 3310 MIN 720 AC-FT 1052000
WTR YR 1988 TOTAL 475564 MEAN 1299 MAX 2870 MIN 539 AC-FT 943300

11517500 SHASTA RIVER NEAR YREKA, CA

LOCATION.--Lat 41°49'23", long 122°35'40", in SE 1/4 NE 1/4 sec.24, T.46 N., R.7 W., Siskiyou County, Hydrologic Unit 18010207, on right bank 24 mi downstream from Lake Shastina, 0.5 mi upstream from mouth, and 7 mi north of Yreka.

DRAINAGE AREA.--793 mi^2.

PERIOD OF RECORD.--October 1933 to December 1941, December 1944 to current year.
CHEMICAL DATA: Water years 1959-79.
WATER TEMPERATURE: Water years 1965-79.
SEDIMENT DATA: Water years 1955-56, 1958-62.

REVISED RECORDS.--WSP 1929: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 2,000 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 2, 1933, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records fair. Low flow completely regulated by Lake Shastina (formerly Lake Dwinnell) beginning in 1928; storage limited to 50,000 acre-ft. Many diversions above station for irrigation.

AVERAGE DISCHARGE.--51 years (water years 1934-41, 1946-88), 188 ft^3/s, 136,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,500 ft^3/s, Dec. 22, 1964, gage height, 12.92 ft, in gage well, 13.85 ft, from floodmarks, from rating curve extended above 4,100 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 1.5 ft^3/s, Aug. 24, 1981, July 17, 1985.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 630 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 16	2030	*352	*3.86				

Minimum daily, 12.0 ft^3/s, Aug. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89	159	198	182	204	190	40	81	67	23	17	19
2	90	165	252	180	199	189	47	74	74	33	19	21
3	92	163	240	186	193	186	34	72	76	27	17	24
4	98	163	208	197	189	186	36	70	84	17	19	23
5	109	158	201	216	187	187	33	71	187	23	24	24
6	113	157	220	196	186	187	53	76	261	30	71	28
7	125	163	283	192	186	183	48	87	246	20	45	20
8	122	162	280	195	186	184	40	90	218	24	28	16
9	125	170	293	202	187	184	53	93	184	22	25	14
10	136	185	301	208	193	178	56	112	173	20	31	23
11	134	177	309	224	205	176	58	96	160	28	34	20
12	137	174	245	217	199	174	54	76	152	30	34	21
13	138	184	222	217	198	172	38	74	131	27	38	24
14	136	181	211	217	194	168	39	67	74	24	36	28
15	129	178	213	306	191	164	57	65	52	30	29	43
16	134	177	210	309	187	151	53	63	44	30	19	37
17	133	178	209	299	185	149	58	34	54	26	12	35
18	139	180	202	238	186	139	78	54	49	20	12	32
19	150	177	200	213	183	104	114	67	36	22	18	36
20	144	178	199	202	183	104	160	57	35	18	24	49
21	145	187	199	197	187	85	199	55	34	31	20	53
22	138	189	199	193	193	69	200	50	21	24	23	50
23	138	184	197	193	188	71	195	45	18	19	32	55
24	138	183	193	194	185	57	174	44	23	20	31	52
25	141	181	188	196	185	61	159	50	38	18	25	45
26	143	180	186	192	188	70	147	42	54	25	25	49
27	144	178	186	196	189	64	126	41	51	21	47	56
28	147	177	186	212	190	62	89	40	33	15	32	62
29	149	177	188	219	188	57	84	50	30	15	32	63
30	153	177	187	214	---	53	85	70	39	14	27	55
31	152	---	185	206	---	46	---	61	---	19	18	---
TOTAL	4061	5242	6790	6608	5514	4050	2607	2027	2698	715	864	1077
MEAN	131	175	219	213	190	131	86.9	65.4	89.9	23.1	27.9	35.9
MAX	153	189	309	309	205	190	200	112	261	33	71	63
MIN	89	157	185	180	183	46	33	34	18	14	12	14
AC-FT	8050	10400	13470	13110	10940	8030	5170	4020	5350	1420	1710	2140

CAL YR 1987 TOTAL 43648.0 MEAN 120 MAX 309 MIN 9.0 AC-FT 86580
WTR YR 1988 TOTAL 42253.0 MEAN 115 MAX 309 MIN 12 AC-FT 83810

11519500 SCOTT RIVER NEAR FORT JONES, CA

LOCATION.--Lat 41°38'27", long 123°00'50", in NE 1/4 NE 1/4 sec.29, T.44 N., R.10 W., Siskiyou County, Hydrologic Unit 18010208, on right bank 1.8 mi upstream from Snow Creek and 9.0 mi west of Fort Jones.

DRAINAGE AREA.--653 mi^2.

PERIOD OF RECORD.--December 1941 to current year. Monthly discharge only October to December 1941, published in WSP 1315-B.
CHEMICAL DATA: Water years 1959-79.
SEDIMENT DATA: Water years 1955-56.

REVISED RECORDS.--WSP 1445: 1942-43(M), 1946(M), 1948. WSP 1715: 1951-52(M). WSP 1929: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,623.80 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1966, water-stage recorder 400 ft downstream at datum 2.00 ft higher.

REMARKS.--Estimated daily discharges: Aug. 30, 31. Records good. Diversions for irrigation of about 30,000 acres above station.

AVERAGE DISCHARGE.--47 years, 660 ft^3/s, 478,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,600 ft^3/s, Dec. 22, 1964, gage height, 25.34 ft, from floodmarks, from rating curve extended above 15,000 ft^3/s on basis of slope-area measurement at 21.40 ft, site and datum then in use; minimum daily, 5.0 ft^3/s, several days during August 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 10	1830	*4,610	*11.30				

Minimum daily, 6.2 ft^3/s, Aug. 30 to Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	25	67	236	615	645	317	478	574	154	26	6.2
2	17	25	655	229	567	616	304	452	845	141	25	7.6
3	17	26	1070	229	520	588	328	419	715	134	23	8.7
4	17	27	891	229	493	591	358	395	631	129	26	6.4
5	18	27	1160	228	474	651	321	378	656	121	28	8.0
6	18	30	1470	223	462	640	304	366	720	113	27	9.7
7	18	29	1360	220	449	604	333	360	681	108	29	12
8	18	29	810	219	443	564	351	360	630	94	27	11
9	18	31	815	254	482	568	323	360	585	74	25	12
10	18	38	3560	586	544	547	309	344	606	59	19	13
11	18	40	2350	820	570	515	319	336	594	50	17	12
12	18	37	1280	642	578	481	343	358	565	53	16	14
13	18	40	912	544	582	454	390	479	542	49	14	14
14	18	38	739	686	577	437	429	508	526	43	13	13
15	18	37	633	1140	564	423	449	473	492	41	13	12
16	18	37	562	1010	551	397	446	526	477	35	12	13
17	19	37	497	815	533	376	456	642	465	31	12	14
18	18	37	446	692	515	359	472	548	439	32	11	15
19	18	37	408	609	495	353	491	480	417	35	10	16
20	19	39	380	551	481	354	636	448	392	35	8.7	14
21	19	41	363	522	470	401	587	436	362	35	8.1	12
22	23	41	357	494	469	406	540	463	325	34	9.1	12
23	23	41	334	481	469	371	510	470	291	31	8.1	13
24	22	45	304	469	469	385	470	448	260	31	8.2	13
25	20	50	279	458	468	402	445	420	240	34	8.2	14
26	21	50	273	446	470	401	431	422	232	34	7.7	11
27	22	50	268	455	503	398	429	415	214	36	7.1	12
28	22	51	265	529	562	391	447	411	195	38	7.2	13
29	23	53	260	682	630	363	479	479	181	35	7.2	13
30	27	54	244	710	---	335	501	447	169	33	6.2	12
31	25	---	242	657	---	319	---	400	---	29	6.2	---
TOTAL	605	1142	23254	16065	15005	14335	12518	13521	14021	1901	465.0	356.6
MEAN	19.5	38.1	750	518	517	462	417	436	467	61.3	15.0	11.9
MAX	27	54	3560	1140	630	651	636	642	845	154	29	16
MIN	17	25	67	219	443	319	304	336	169	29	6.2	6.2
AC-FT	1200	2270	46120	31860	29760	28430	24830	26820	27810	3770	922	707

CAL YR 1987 TOTAL 128333.3 MEAN 352 MAX 3560 MIN 9.3 AC-FT 254500
WTR YR 1988 TOTAL 113188.6 MEAN 309 MAX 3560 MIN 6.2 AC-FT 224500

11520500 KLAMATH RIVER NEAR SEIAD VALLEY, CA

LOCATION.--Lat 41°51'14", long 123°13'52", in SW 1/4 SW 1/4 sec.3, T.46 N., R.12 W., Siskiyou County, Hydrologic Unit 18010206, Klamath National Forest, on left bank 0.4 mi upstream from Bittenbender Creek, 1.4 mi downstream from Grider Creek, 2.2 mi west of Seiad Valley, and 55 mi downstream from Iron Gate Dam.

DRAINAGE AREA.--6,940 mi^2, approximately (not including Lost River or Lower Klamath Lake basins).

PERIOD OF RECORD.--October 1912 to September 1925, July 1951 to current year. Monthly discharges only for some periods, published in WSP 1315-B.
CHEMICAL DATA: Water years 1959-66.
WATER TEMPERATURE: Water years 1964-79.
SEDIMENT DATA: Water years 1955-56.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,320 ft above National Geodetic Vertical Datum of 1929, from river-profile map. November 1912 to June 1925, nonrecording gage at site 3.5 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Low flow regulated considerably by reservoirs and powerplants above station. Large diversions above station for irrigation.

AVERAGE DISCHARGE.--50 years (water years 1913-25, 1952-88), 4,086 ft^3/s, 2,960,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 165,000 ft^3/s, Dec. 23, 1964, gage height, 33.75 ft, from floodmarks, from rating curve extended above 49,000 ft^3/s on basis of slope-area measurements at gage heights 20.1 and 29.2 ft; minimum daily, 320 ft^3/s, Nov. 25, 1917.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 10	1300	*8,720	*8.13				

Minimum daily, 745 ft^3/s, July 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1530	1620	1950	2020	3370	4040	2120	2140	2100	1160	872	1120
2	1530	1630	2930	2000	3240	3930	2120	2080	2590	1110	884	1120
3	1530	1630	3410	2000	3120	3850	2180	2040	2430	1100	913	1120
4	1530	1640	2880	2000	3050	3880	2210	1990	2270	1090	935	1130
5	1540	1650	3240	2020	3010	4040	2170	1950	2220	1060	973	1120
6	1540	1640	3550	2030	2970	4110	2130	1950	2490	1050	1050	1120
7	1550	1630	4210	2030	2930	3920	2180	1960	2580	952	1100	1120
8	1560	1640	3180	2030	2920	3630	2200	1990	2640	888	1100	1110
9	1560	1650	3260	2230	3050	3630	2170	2000	2600	856	1130	1110
10	1560	1650	7580	3150	3200	3550	2160	2000	2620	846	1150	1110
11	1600	1650	6090	4220	3300	3490	2150	1970	2580	828	1150	1120
12	1600	1650	3960	3770	3550	3440	2220	1960	2440	825	1170	1120
13	1600	1740	3220	3460	3550	3350	2250	2110	2350	825	1170	1120
14	1600	1750	2860	3780	3500	3320	2310	2150	2030	820	1180	1130
15	1600	1700	2710	5680	3460	3300	2280	2110	1890	808	1170	1140
16	1600	1700	2600	5060	3460	3190	2120	2150	1830	804	1160	1130
17	1600	1700	2710	4690	3670	2760	2120	2270	1810	794	1150	1140
18	1600	1700	2810	4200	3700	2730	2140	2200	1770	772	1140	1140
19	1600	1700	2750	3890	3740	2420	2180	2120	1730	764	1150	1140
20	1600	1690	2690	3460	3600	2270	2350	2050	1670	753	1140	1170
21	1600	1630	2670	3220	3570	2290	2440	2010	1580	747	1140	1180
22	1600	1690	2650	2590	3570	2290	2410	2020	1500	745	1140	1180
23	1600	1690	2640	3050	3720	2280	2330	2040	1440	803	1150	1180
24	1600	1700	2570	3050	3880	2290	2260	2030	1400	899	1140	1200
25	1600	1770	2530	3020	3870	2270	2180	1980	1350	909	1140	1170
26	1600	1720	2510	3000	4000	2580	2140	1870	1350	918	1140	1160
27	1600	1710	2500	3010	4100	2690	2120	1600	1320	920	1150	1160
28	1600	1710	2490	3140	4210	2670	2100	1630	1260	904	1160	1180
29	1600	1710	2300	3450	4250	2290	2160	1740	1200	900	1130	1180
30	1610	1710	2210	3560	---	2160	2170	1710	1180	887	1130	1170
31	1610	---	2180	3470	---	2140	---	1650	---	880	1130	---
TOTAL	49050	50460	95840	98280	101560	94800	66070	61470	58220	27617	34237	34290
MEAN	1582	1682	3092	3170	3502	3058	2202	1983	1941	891	1104	1143
MAX	1610	1770	7580	5680	4250	4110	2440	2270	2640	1160	1180	1200
MIN	1530	1620	1950	2000	2920	2140	2100	1600	1180	745	872	1110
AC-FT	97290	100100	190100	194900	201400	188000	131000	121900	115500	54780	67910	68010

CAL YR 1987 TOTAL 867893 MEAN 2378 MAX 7580 MIN 928 AC-FT 1721000
WTR YR 1988 TOTAL 771894 MEAN 2109 MAX 7580 MIN 745 AC-FT 1531000

KLAMATH RIVER BASIN

11521500 INDIAN CREEK NEAR HAPPY CAMP, CA

LOCATION.--Lat 41°50'07", long 123°22'55", in SW 1/4 SW 1/4 sec.26, T.17 N., R.7 E., Siskiyou County, Hydrologic Unit 18010209, on left bank 0.2 mi upstream from Slater Creek, 3.0 mi north of Happy Camp, and 3.5 mi upstream from mouth.

DRAINAGE AREA.--120 mi^2.

PERIOD OF RECORD.--September 1911 to September 1921 (fragmentary), December 1956 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.--WSP 1635: 1957-58.

GAGE.--Water-stage recorder. Datum of gage is 1,198.37 ft above National Geodetic Vertical Datum of 1929. Prior to December 1956, nonrecording gages at sites 1.0 mi upstream at different datums. December 1956 to Sept. 20, 1969, water-stage recorder at site 0.8 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Small diversions above station for irrigation.

AVERAGE DISCHARGE.--34 years (water years 1912-14, 1958-88), 431 ft^3/s, 312,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,000 ft^3/s, Dec. 22, 1964, gage height, 24.3 ft, from floodmarks, present site and datum, from rating curve extended above 6,000 ft^3/s on basis of slope-area measurement at gage height 29.0 ft, previous site and datum; minimum discharge observed, 20 ft^3/s, Aug. 19 to Sept. 6, 1914.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 21, 1955, reached a stage of 29.0 ft, at 1956-69 site and datum, from floodmarks, discharge, 23,000 ft^3/s on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 10	0400	*5,510	*10.54				

Minimum daily, 34 ft^3/s, several days during October.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	39	499	148	517	536	244	207	533	107	53	38
2	35	41	1150	144	457	470	255	203	409	105	52	38
3	35	40	750	167	408	464	309	213	324	103	52	37
4	34	39	574	191	373	513	287	208	265	101	51	37
5	34	38	398	200	349	559	258	200	249	99	52	36
6	34	38	1590	195	329	501	256	195	252	96	54	35
7	34	38	757	201	314	451	271	218	266	92	51	36
8	34	39	477	209	346	418	244	241	256	89	50	35
9	34	51	1230	434	612	446	224	229	298	86	48	35
10	34	46	3260	1510	656	393	219	220	336	83	48	35
11	34	42	1160	1360	673	363	231	235	289	82	47	35
12	35	47	690	794	660	340	247	264	258	81	47	36
13	35	101	491	629	613	319	258	311	235	79	48	36
14	34	74	390	1460	546	305	260	248	220	78	49	36
15	34	54	352	1900	521	295	242	227	206	78	52	36
16	34	56	311	1130	488	282	246	259	199	75	49	36
17	34	63	264	824	449	272	236	236	185	73	47	37
18	34	61	240	661	415	270	213	209	174	70	47	38
19	34	52	220	535	389	277	254	197	165	68	46	40
20	34	51	206	462	387	278	265	187	156	67	45	46
21	34	60	204	420	406	286	267	185	149	66	44	43
22	35	55	207	387	428	277	254	183	144	64	43	40
23	35	53	195	364	435	345	229	172	138	63	42	40
24	36	60	186	352	446	308	212	161	132	62	42	39
25	37	69	178	356	455	296	199	153	128	61	41	39
26	36	56	171	360	479	310	191	147	124	62	41	39
27	36	52	167	342	547	328	189	143	119	60	41	40
28	35	50	163	412	601	291	197	165	116	58	40	40
29	36	48	159	667	573	270	231	160	114	57	40	39
30	37	68	163	749	---	256	226	150	110	56	40	37
31	38	---	153	612	---	245	---	154	---	54	39	---
TOTAL	1080	1581	16955	18175	13872	10964	7214	6280	6549	2375	1441	1134
MEAN	34.8	52.7	547	586	478	354	240	203	218	76.6	46.5	37.8
MAX	38	101	3260	1900	673	559	309	311	533	107	54	46
MIN	34	38	153	144	314	245	189	143	110	54	39	35
AC-FT	2140	3140	33630	36050	27520	21750	14310	12460	12990	4710	2860	2250

CAL YR 1987 TOTAL 124581 MEAN 341 MAX 3260 MIN 34 AC-FT 247100
WTR YR 1988 TOTAL 87620 MEAN 239 MAX 3260 MIN 34 AC-FT 173800

11522500 SALMON RIVER AT SOMES BAR, CA

LOCATION.--Lat 41°22'40", long 123°28'35", in NE 1/4 sec.3, T.11 N., R.6 E., Siskiyou County, Hydrologic Unit 18010210, Klamath National Forest, on left bank at Somes Bar, 1.0 mi upstream from mouth.

DRAINAGE AREA.--751 mi^2.

PERIOD OF RECORD.--September 1911 to September 1915, October 1927 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.--WSP 1285: 1912, 1914, 1915(M), 1946(M), 1948(M). WDR CA-72-1: 1971(P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 482.97 ft above National Geodetic Vertical Datum of 1929. Prior to October 1927, nonrecording gage at different datum, October 1927 to Dec. 22, 1964, water-stage recorder at site 0.5 mi upstream at datum 6.54 ft higher.

REMARKS.--Estimated daily discharges: Dec. 25-29, June 2-30. Records good. No storage or large diversion above station.

AVERAGE DISCHARGE.--65 years, 1,813 ft^3/s, 1,314,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 133,000 ft^3/s, Dec. 22, 1964, gage height, 46.6 ft, present site and datum, from floodmarks, from rating curve extended above 33,000 ft^3/s; minimum, 70 ft^3/s, Aug. 25, Sept. 4, 5, 1931.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 10	0945	*20,200	*13.22				

Minimum daily, 113 ft^3/s, Oct. 7-22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	115	128	1160	609	2230	1680	918	1200	3660	678	264	168
2	115	138	6260	599	1960	1480	978	1130	4050	677	260	168
3	115	141	3770	737	1770	1450	1220	1100	3100	669	252	165
4	115	141	3100	771	1610	1540	1240	1050	2400	639	253	164
5	115	139	2540	749	1500	1820	1070	1010	2070	607	244	158
6	114	138	3820	709	1400	1630	1080	1020	2200	578	266	157
7	113	138	3290	709	1330	1480	1210	1130	2310	555	270	157
8	113	138	2280	775	1300	1400	1090	1240	2220	533	252	157
9	113	166	3370	1710	1480	1500	999	1200	2190	519	240	157
10	113	185	14200	3880	1630	1350	1030	1210	2450	505	236	157
11	113	166	6200	4570	1640	1250	1170	1400	2280	491	229	148
12	113	158	3550	3190	1660	1160	1360	1730	2030	478	221	147
13	113	298	2570	2650	1660	1110	1480	2400	1860	463	221	147
14	113	321	1990	3700	1590	1080	1430	1770	1710	455	221	147
15	113	233	1730	5190	1550	1040	1380	1660	1600	447	227	147
16	113	222	1510	4180	1490	992	1370	2190	1480	435	233	147
17	113	229	1300	3300	1400	968	1420	2110	1370	419	225	147
18	113	247	1160	2720	1320	959	1280	1720	1270	400	217	147
19	113	228	1050	2260	1250	982	1360	1600	1180	386	215	147
20	113	220	971	1970	1210	1020	1440	1550	1110	370	209	165
21	113	268	963	1800	1210	1050	1370	1680	1060	358	204	171
22	113	249	1050	1690	1230	1010	1280	1810	1010	349	201	169
23	117	220	962	1680	1240	1190	1180	1640	960	340	195	164
24	126	213	888	1750	1250	1090	1140	1480	905	330	193	153
25	128	234	835	1850	1250	1020	1080	1420	865	320	186	151
26	128	215	790	1980	1280	1050	1050	1400	820	320	186	151
27	128	199	750	2270	1450	1170	1110	1260	780	314	186	156
28	128	191	715	2630	1640	1060	1240	1490	750	298	182	164
29	128	188	680	2910	1650	999	1570	1550	720	286	175	160
30	128	205	675	2830	---	944	1410	1220	700	279	175	151
31	128	---	646	2520	---	911	---	1150	---	271	175	---
TOTAL	3636	5956	74775	68888	43180	37385	36955	45520	51110	13769	6813	4687
MEAN	117	199	2412	2222	1489	1206	1232	1468	1704	444	220	156
MAX	128	321	14200	5190	2230	1820	1570	2400	4050	678	270	171
MIN	113	128	646	599	1210	911	918	1010	700	271	175	147
AC-FT	7210	11810	148300	136600	85650	74150	73300	90290	101400	27310	13510	9300

CAL YR 1987 TOTAL 420087 MEAN 1151 MAX 14200 MIN 113 AC-FT 833200
WTR YR 1988 TOTAL 392674 MEAN 1073 MAX 14200 MIN 113 AC-FT 778900

11523000 KLAMATH RIVER AT ORLEANS, CA

LOCATION.--Lat 41°18'13", long 123°32'00", in SW 1/4 NE 1/4 sec.31, T.11 N., R.6 E., Humboldt County, Hydrologic Unit 18010209, Six Rivers National Forest, on right bank at Orleans, 25 ft upstream from highway bridge, and 0.2 mi downstream from Cheenitch Creek.

DRAINAGE AREA.--8,475 mi^2, not including Lost River or Lower Klamath Lake basins.

PERIOD OF RECORD.--October 1927 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1965, published as "at Somesbar."

REVISED RECORDS.--WSP 1565: 1935(M), 1949.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 355.98 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1965, at site 6.7 mi upstream at datum 90.68 ft higher.

REMARKS.--Estimated daily discharges: July 21-28. Records good except for estimated daily discharge, which are fair. Flow considerably regulated by reservoirs and powerplants above station. Large diversions above station for irrigation.

AVERAGE DISCHARGE.--61 years, 8,277 ft^3/s, 5,997,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 307,000 ft^3/s, Dec. 22, 1964, gage height, 76.5 ft, from floodmarks, site and datum then in use, from rating curve extended above 80,000 ft^3/s by slope-conveyance study; minimum daily, 320 ft^3/s, Aug. 25, Sept. 1, 1951.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 40,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 10	0915	*58,800	*17.84				

Minimum daily, 1,450 ft^3/s, Aug. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1560	1640	4750	3680	8970	8380	3670	4020	7980	2760	1480	1540
2	1560	1660	16600	3520	8190	7500	3760	3870	9000	2710	1450	1530
3	1560	1670	13400	3830	7590	7200	4170	3830	7450	2660	1450	1540
4	1560	1670	10100	4100	7100	7400	4280	3690	6350	2600	1470	1530
5	1560	1660	8710	4150	6750	8210	3970	3590	5990	2530	1480	1530
6	1560	1650	14300	4070	6430	7980	3870	3560	6290	2460	1560	1510
7	1560	1650	14300	4050	6230	7490	4050	3810	6550	2400	1620	1500
8	1560	1650	9700	4370	6170	6810	3950	4020	6480	2240	1620	1520
9	1570	1720	12900	6620	7260	6920	3760	3970	6500	2120	1620	1510
10	1570	1750	41900	15700	8000	6520	3730	3910	7100	2060	1630	1500
11	1570	1730	22600	20100	8140	6120	3900	4150	6570	2010	1640	1490
12	1580	1720	13100	13900	8270	5850	4170	4460	6120	1970	1640	1500
13	1590	2170	9460	11100	8320	5610	4350	6070	5630	1950	1640	1500
14	1590	2270	7670	14900	7930	5410	4410	5250	5280	1920	1650	1510
15	1590	2100	6900	25000	7650	5300	4390	4950	4840	1900	1690	1530
16	1590	2070	6290	19200	7390	5120	4160	5530	4650	1880	1670	1530
17	1590	2100	5690	15300	7270	4730	4130	5680	4460	1840	1650	1520
18	1590	2130	5630	12400	7140	4440	3950	5100	4240	1800	1630	1520
19	1590	2070	5330	10500	7060	4420	4140	4760	4110	1750	1620	1540
20	1590	2060	5060	9330	6850	4070	4530	4570	3970	1700	1600	1580
21	1590	2120	5010	8250	6800	4110	4640	4580	3810	1690	1590	1600
22	1590	2110	5150	7460	6870	4080	4530	4690	3650	1680	1600	1600
23	1600	2060	4960	7050	6960	4480	4260	4520	3520	1680	1580	1590
24	1610	2060	4740	7320	7220	4370	4060	4320	3400	1630	1580	1590
25	1640	2150	4570	7340	7230	4140	3850	4160	3290	1600	1570	1590
26	1640	2100	4450	7390	7310	4260	3730	4050	3210	1590	1560	1570
27	1640	2040	4350	7690	7890	4780	3730	3750	3100	1580	1560	1580
28	1630	2020	4290	8490	8400	4580	3840	3860	3000	1570	1560	1580
29	1630	2010	4220	9910	8460	4300	4370	4200	2910	1540	1570	1590
30	1630	2090	3960	10900	---	3830	4400	3760	2820	1530	1550	1570
31	1630	---	3870	9880	---	3700	---	3590	---	1510	1540	---
TOTAL	49320	57900	283960	297500	215850	172110	122750	134270	152270	60860	49070	46290
MEAN	1591	1930	9160	9597	7443	5552	4092	4331	5076	1963	1583	1543
MAX	1640	2270	41900	25000	8970	8380	4640	6070	9000	2760	1690	1600
MIN	1560	1640	3870	3520	6170	3700	3670	3560	2820	1510	1450	1490
AC-FT	97830	114800	563200	590100	428100	341400	243500	266300	302000	120700	97330	91820

CAL YR 1987 TOTAL 1965840 MEAN 5386 MAX 41900 MIN 1230 AC-FT 3899000
WTR YR 1988 TOTAL 1642150 MEAN 4487 MAX 41900 MIN 1450 AC-FT 3257000

11523200 TRINITY RIVER ABOVE COFFEE CREEK, NEAR TRINITY CENTER, CA

LOCATION.--Lat 41°06'41", long 122°42'16", in SW 1/4 NW 1/4 sec.32, T.38 N., R.7 W., Trinity County, Hydrologic Unit 18010211, Shasta National Forest, on left bank 24 ft upstream from State Highway No. 3 bridge, 1.8 mi upstream from Coffee Creek, and 8.6 mi north of Trinity Center.

DRAINAGE AREA.--149 mi^2.

PERIOD OF RECORD.--September 1957 to current year.

REVISED RECORDS.--WDR CA-85-2: 1982 (M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,536.93 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1978, water-stage recorder at site 0.2 mi downstream at datum 3.57 ft lower.

REMARKS.--Estimated daily discharges: June 29 to July 2. Records fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--31 years, 416 ft^3/s, 301,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,500 ft^3/s, Jan. 16, 1974, gage height, 12.96 ft, site and datum then in use, from rating curve extended above 4,500 ft^3/s on basis of slope-area measurement of peak flow; maximum gage height, 13.78 ft, Nov. 16, 1981, present site and datum; minimum daily, 16 ft^3/s, Sept. 11-14, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1955, reached a stage of 10.5 ft, previous site and datum, from floodmarks, discharge, 11,400 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 5	0900	*3,890	*9.22				

Minimum daily, 28 ft^3/s, Oct. 19-22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	34	127	128	302	698	387	558	572	139	59	38
2	32	34	513	129	265	595	426	499	508	137	58	36
3	31	34	1220	141	241	566	515	460	461	133	56	36
4	31	34	2640	150	227	579	492	430	444	129	54	36
5	31	33	1860	150	220	601	445	411	432	122	53	35
6	30	33	2480	146	217	576	507	387	456	118	53	35
7	30	33	963	143	216	538	545	395	470	116	54	35
8	30	34	626	149	223	510	459	400	470	115	54	35
9	30	60	518	153	294	543	432	406	465	110	52	35
10	30	46	1380	239	403	468	466	420	489	105	50	35
11	30	38	946	320	503	418	538	458	494	102	50	35
12	29	35	614	248	536	381	606	604	478	100	50	35
13	29	67	456	224	525	355	612	714	451	98	50	35
14	29	61	368	238	467	345	594	598	426	96	49	35
15	29	45	327	275	470	345	553	638	417	94	49	35
16	29	42	292	255	453	332	578	859	398	90	48	35
17	29	44	255	224	407	327	620	702	372	86	47	35
18	29	48	229	206	380	349	578	588	345	83	47	35
19	28	45	213	191	355	399	890	549	324	79	45	35
20	28	57	196	182	365	448	687	545	297	77	44	36
21	28	75	188	179	390	463	620	584	271	76	43	37
22	28	54	184	178	415	434	616	582	250	73	43	37
23	32	47	172	187	447	431	563	536	232	73	42	37
24	34	45	157	209	466	412	588	497	213	71	41	37
25	34	44	158	236	466	444	564	484	204	68	40	37
26	31	41	153	265	487	523	597	457	191	65	39	37
27	29	41	148	304	615	552	675	414	177	65	39	37
28	29	41	149	359	774	459	722	486	164	65	38	37
29	32	40	149	435	753	422	791	420	154	64	38	37
30	34	52	140	399	---	389	661	342	145	62	38	35
31	35	---	136	345	---	365	---	328	---	61	38	---
TOTAL	943	1337	17957	6987	11882	14267	17327	15751	10770	2872	1461	1075
MEAN	30.4	44.6	579	225	410	460	578	508	359	92.6	47.1	35.8
MAX	35	75	2640	435	774	698	890	859	572	139	59	38
MIN	28	33	127	128	216	327	387	328	145	61	38	35
AC-FT	1870	2650	35620	13860	23570	28300	34370	31240	21360	5700	2900	2130

CAL YR 1987 TOTAL 115325 MEAN 316 MAX 4660 MIN 28 AC-FT 228700
WTR YR 1988 TOTAL 102629 MEAN 280 MAX 2640 MIN 28 AC-FT 203600

11525400 CLAIR ENGLE LAKE NEAR LEWISTON, CA

LOCATION.--Lat 40°48'05", long 122°45'44", in NW 1/4 SW 1/4 sec.15, T.34 N., R.8 W., Trinity County, Hydrologic Unit 18010211, Trinity National Forest, Whiskeytown-Shasta-Trinity National Recreation Area, on side of intake structure of Trinity Dam on Trinity River, 9 mi north of Lewiston.

DRAINAGE AREA.--692 mi^2.

PERIOD OF RECORD.--November 1960 to current year. Prior to October 1963 published as Trinity Lake near Lewiston.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Prior to Jan. 4, 1962, nonrecording gage at same site and datum. Contents based on capacity table dated April 1962 provided by U.S. Bureau of Reclamation.

REMARKS.--The lake is formed by an earthfill dam completed in November 1960. Storage began Nov. 23, 1960. Usable capacity, 2,437,700 acre-ft between elevations 1,995.5 ft, elevation of invert of river outlets, and 2,370.0 ft, crest of glory hole spillway. Dead storage, 10,000 acre-ft. Operating pool is from elevation 2,145.0 ft, capacity, 312,621 acre-ft, to 2,370.0 ft, capacity, 2,447,700 acre-ft. Figures given herein represent total contents at 2400 hours. Lake is used for power generation, flood control, and recreation.

COOPERATION.--Records were provided by U.S. Bureau of Reclamation.

EXTREMES (at 2400) FOR PERIOD OF RECORD.--Maximum contents, 2,588,000 acre-ft, Jan. 19, 1974, elevation, 2,378.32 ft; minimum since first filling, 222,400 acre-ft, Nov. 9, 1977, elevation, 2,120.22 ft.
EXTREMES (at 2400) FOR CURRENT YEAR.--Maximum contents, 2,077,448 acre-ft, June 26, elevation, 2,346.22 ft; minimum, 1,479,050 acre-ft, Sept. 30, elevation, 2,301.42 ft.

Capacity table (elevation, in feet NGVD, and contents, in acre-feet)
(Based on table dated April 1962, provided by U.S. Bureau of Reclamation)

2,100	162,231	2,250	955,140
2,140	292,859	2,310	1,583,586
2,190	529,611	2,380	2,616,989

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1806451	1582591	1496631	1623269	1688442	1775868	1855466	1919860	2017318	2075224	1924375	1703958
2	1799288	1577003	1507709	1623777	1690653	1779486	1857665	1922400	2020826	2074778	1920142	1696513
3	1792266	1572035	1520170	1626186	1692999	1782581	1860286	1924799	2024038	2075372	1915906	1688833
4	1785404	1566591	1541128	1628471	1694689	1786077	1862912	1926919	2026665	2075224	1911406	1681303
5	1778144	1561772	1555117	1629357	1696513	1789838	1865399	1929036	2029292	2073296	1906348	1673666
6	1770780	1558437	1577127	1630119	1696901	1793614	1868025	1931589	2032661	2072557	1898638	1665800
7	1763288	1554871	1585458	1631261	1700164	1796720	1871346	1934711	2035739	2073592	1891092	1658077
8	1755562	1551797	1592826	1632401	1701605	1799691	1873838	1937268	2038528	2070045	1883844	1650775
9	1749043	1548599	1601343	1634690	1703958	1802935	1876060	1940106	2041753	2064135	1876477	1644762
10	1740020	1545286	1621749	1638643	1706836	1805911	1878839	1942802	2044684	2057345	1869409	1636601
11	1732353	1540394	1631896	1643486	1710238	1808216	1880648	1946089	2047775	2050132	1861805	1628217
12	1724958	1535866	1637239	1646545	1713913	1810385	1882592	1949647	2051013	2043950	1853955	1620483
13	1717331	1532937	1641447	1650262	1717462	1812286	1884400	1954500	2054103	2037207	1845702	1612535
14	1709455	1529288	1646163	1654235	1721143	1814184	1885510	1958643	2056166	2030610	1837489	1604857
15	1702259	1526245	1645907	1658077	1724298	1815949	1887180	1962803	2058373	2024038	1831197	1596575
16	1694950	1522715	1646418	1661677	1727730	1817711	1889134	1969256	2061768	2017757	1823839	1588579
17	1687399	1519442	1645525	1664256	1730503	1819618	1892348	1973852	2062655	2011350	1816085	1580356
18	1680011	1517142	1643996	1665413	1733275	1821251	1894865	1977889	2066054	2005680	1808895	1572035
19	1672500	1515203	1643996	1666187	1736051	1823430	1900453	1981782	2069158	1999140	1801448	1563625
20	1665155	1513267	1644379	1666574	1738563	1825885	1904383	1985963	2070341	1992623	1794425	1556101
21	1657439	1509997	1642593	1666961	1741215	1828336	1906770	1990307	2072557	1985963	1787150	1548230
22	1650005	1508791	1640554	1667219	1744266	1830515	1910422	1994363	2073001	1979188	1779755	1540761
23	1642848	1506142	1638767	1667731	1747449	1833112	1912531	1996244	2074927	1972413	1772253	1533181
24	1635455	1502889	1636218	1669279	1750766	1835574	1916189	1998129	2075224	1965383	1764489	1525271
25	1627583	1500360	1634817	1670181	1753829	1838448	1918588	1999865	2076706	1958499	1756759	1517264
26	1620357	1497831	1633035	1671338	1757426	1841047	1919718	2001608	2077448	1951218	1749043	1509394
27	1613293	1495075	1631642	1672759	1761424	1844194	1902563	2004370	2076111	1944084	1741481	1501807
28	1606616	1493755	1629992	1674052	1766629	1846803	1919718	2006987	2076260	1940532	1734200	1494355
29	1600089	1492198	1630372	1677033	1771450	1849140	1919012	2009461	2074927	1936700	1726408	1486686
30	1593950	1492198	1625554	1681433	---	1851202	1917316	2011350	2075372	1933009	1719173	1479050
31	1588329	---	1623015	1685059	---	1853542	---	2012951	---	1929036	1711811	---
MAX	1806451	1582591	1646418	1685059	1771450	1853542	1919718	2012951	2077448	2075372	1924375	1703958
MIN	1588329	1492198	1496631	1623269	1688442	1775868	1855466	1919860	2017318	1929036	1711811	1479050
a	2310.38	2302.52	2313.14	2317.98	2324.53	2330.58	2335.16	2341.83	2346.08	2335.99	2320.03	2301.42
b	-224772	-96131	+130817	+62044	+86391	+82092	+63774	+95635	+62421	-146336	-217225	-232761
c	2758	762	0	188	1087	3075	3415	5202	5934	8782	7529	5506

CAL YR 1987 b -155802
WTR YR 1988 b -334051

a Elevation, in feet NGVD, at end of month.
b Change in contents, in acre-feet.
c Evaporation, in acre-feet; not reviewed by U.S. Geological Survey.

11525430 JUDGE FRANCIS CARR POWERPLANT NEAR FRENCH GULCH, CA

LOCATION.--Lat 40°38'49", long 122°37'34", Shasta County, Hydrologic Unit 18010212, at powerplant 1.6 mi downstream from Mill Creek and 3.8 mi south of French Gulch.

PERIOD OF RECORD.--April 1963 to current year.

GAGE.--Recorded powerplant output.

REMARKS.--Water is diverted from Trinity River at NW 1/4 SE 1/4 sec.8, T.33 N., R.8 W., through a tunnel to powerplant and then into Whiskeytown Lake (station 11371700). See schematic diagram of Klamath and Trinity River basins.

COOPERATION.--Records were provided by U.S. Bureau of Reclamation. Discharge not rounded to U.S. Geological Survey standards.

AVERAGE DISCHARGE.--25 years, 1,506 ft^3/s, 1,091,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 4,000 ft^3/s, Oct. 18, 1987; no flow many days most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3154	2514	594	172	10		.0	5	.0	599	1916	3509
2	3084	2495	459	172	.0		.0	.0	.0	707	1815	3438
3	3084	2560	.0	6	.0		.0	.0	.0	.0	1916	3452
4	3084	2522	.0	223	.0		.0	.0	.0	.0	1916	3474
5	3154	1684	.0	62	.0		.0	.0	.0	588	2251	3520
6	3530	1330	.0	229	.0		.0	.0	.0	587	3374	3654
7	3530	1473	.0	344	.0		.0	.0	.0	.0	3376	3540
8	3517	1504	.0	324	.0		.0	.0	.0	2079	3434	2909
9	3505	1401	.0	213	.0		.0	.0	.0	3026	3427	2720
10	3505	1498	.0	210	.0		.0	65	.0	3139	3414	3564
11	3625	1596	.0	213	.0		763	58	.0	3342	3515	3588
12	3625	3033	.0	216	.0		781	.0	.0	3420	3508	3541
13	3505	1763	.0	162	.0		693	.0	.0	3272	3534	3600
14	3480	1673	.0	590	.0		782	.0	506	3245	3526	3596
15	3600	1247	904	590	.0		829	.0	500	3302	2780	3597
16	2352	1829	921	574	.0		830	.0	.0	3229	3487	3515
17	3480	1840	1463	.0	.0		.0	.0	759	3328	3497	3522
18	4000	1075	1477	605	.0		821	.0	.0	3172	3534	3638
19	3886	877	735	605	.0		719	.0	.0	3308	3493	3487
20	3995	1026	756	589	.0		724	.0	469	3100	3515	3541
21	3455	918	1486	590	.0		406	.0	.0	3078	3515	3660
22	3510	1046	1509	586	.0		817	.0	773	3377	3493	3569
23	3510	1174	1494	586	.0		780	1021	.0	3389	3535	3608
24	3510	1113	1498	.0	.0		.0	591	643	3342	3518	3564
25	3510	1057	1255	590	.0		815	863	.0	3352	3512	3562
26	3510	939	1255	590	.0		1171	566	.0	3327	3598	3562
27	3114	1067	1120	590	.0		1763	.0	645	3377	3500	3562
28	3114	479	1135	994	.0		2620	121	.0	1451	3525	3569
29	3080	552	1574	1006	.0		2541	.0	816	1916	3515	3529
30	2964	594	1622	.0	---		2622	.0	.0	1653	3597	3530
31	2350	---	1539	.0	---		---	152	---	1901	3584	---
TOTAL	104322	43879	22796.0	11631.0	10.0	0.0	20477.0	3442.0	5111.0	73606.0	100120	105120
MEAN	3365	1463	735	375	.34	.00	683	111	170	2374	3230	3504
MAX	4000	3030	1620	1010	10	.00	2620	1020	816	3420	3600	3660
MIN	2350	479	.00	.00	.00	.00	.00	.00	.00	.00	1810	2720
AC-FT	206900	87030	45220	23070	20	.0	40620	6830	10140	146000	198600	208500

CAL YR 1987 TOTAL 419089.00 MEAN 1148 MAX 4000 MIN .00 AC-FT 831300
WTR YR 1988 TOTAL 490514.0 MEAN 1340 MAX 4000 MIN .00 AC-FT 972900

11525500 TRINITY RIVER AT LEWISTON, CA

LOCATION.--Lat 40°43'10", long 122°48'09", in SW 1/4 NW 1/4 sec.17, T.33 N., R.8 W., Trinity County, Hydrologic Unit 18010211, on right bank 400 ft upstream from Deadwood Creek, 0.8 mi downstream from Lewiston Diversion Dam, and 0.8 mi northeast of Lewiston.

DRAINAGE AREA.--719 mi^2.

PERIOD OF RECORD.--August 1911 to current year.

CHEMICAL DATA: Water years 1951-81.

WATER TEMPERATURE: Water years 1952-55, 1958-83.

SEDIMENT DATA: Water years 1955-61.

REVISED RECORDS.--WSP 331: 1911-12. WSP 1181: 1949. WSP 1929: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,815.95 ft above National Geodetic Vertical Datum of 1929. See WSP 1929 for history of changes prior to July 7, 1964.

REMARKS.--No estimated daily discharges. Records good. Flow completely regulated by Clair Engle Lake (station 11525400) beginning in November 1960 and Lewiston Lake, capacity, 14,660 acre-ft, when diversion to Judge Francis Carr powerplant (station 11525430) began in April 1963. Small diversions above head of Clair Engle Lake for irrigation, power, placer mining, and domestic use between Trinity Dam and station at Lewiston.

AVERAGE DISCHARGE.--49 years (water years 1912-60) prior to storage and diversions, 1,641 ft^3/s, 1,189,000 acre-ft/yr; 28 years (water years 1961-88), 1,922 ft^3/s, 1,392,000 acre-ft/yr, adjusted for changes in contents, evaporation, and diversion; unadjusted flow for same period was 430 ft^3/s, 311,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 71,600 ft^3/s, Dec. 22, 1955, gage height, 27.3 ft, from floodmarks, site and datum then in use; minimum, 23 ft^3/s, July 30, 1924. Since completion of Trinity Dam in 1960, maximum discharge, 14,400 ft^3/s, Jan. 18, 1974, gage height, 10.41 ft; minimum daily, 100 ft^3/s, Apr. 14, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1861 reached a stage of 21.6 ft, from floodmarks, at site 1.1 mi downstream at different datum, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 634 ft^3/s, May 12, gage height, 4.35 ft; minimum daily, 285 ft^3/s, Feb. 6-8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	294	302	302	294	287	467	449	616	493	311	299	295
2	306	303	302	295	289	472	453	614	480	328	299	296
3	306	300	298	322	290	470	454	609	488	330	300	298
4	306	301	298	306	290	469	459	610	441	330	303	298
5	300	303	296	295	288	423	474	611	405	330	306	298
6	296	302	300	296	285	418	463	614	407	331	306	306
7	313	306	298	294	285	418	465	615	405	317	306	306
8	313	301	300	296	285	418	459	617	404	324	304	306
9	311	300	303	300	287	421	458	616	407	316	300	305
10	302	299	302	300	289	417	458	611	406	320	302	302
11	303	299	299	302	291	413	455	613	406	322	301	302
12	286	300	299	300	290	414	450	612	405	312	303	302
13	294	302	298	303	290	414	450	616	404	298	302	300
14	302	302	298	296	291	414	451	525	407	298	302	301
15	302	303	298	297	291	416	451	484	411	298	302	302
16	302	302	297	295	291	416	450	486	411	298	302	302
17	301	301	300	294	290	415	452	487	409	290	318	302
18	289	299	299	292	290	439	526	486	336	299	316	302
19	293	300	299	290	290	398	528	485	300	296	306	302
20	306	299	298	290	290	402	545	484	301	300	306	302
21	306	294	296	291	290	402	540	483	305	302	306	302
22	306	294	297	292	290	402	546	484	302	302	306	302
23	306	296	297	291	290	402	543	486	303	302	306	302
24	306	297	298	288	297	403	543	481	303	302	306	302
25	306	299	297	287	306	389	537	485	306	302	306	302
26	306	299	297	288	314	388	536	478	305	298	306	302
27	304	300	298	287	302	389	535	487	305	306	306	302
28	302	300	297	294	302	389	538	490	306	302	304	301
29	302	300	295	294	302	389	586	491	304	302	298	301
30	302	299	295	289	---	389	613	488	306	302	298	299
31	300	---	296	289	---	388	---	489	---	299	295	---
TOTAL	9371	9002	9247	9147	8472	12864	14867	16753	11171	9567	9420	9042
MEAN	302	300	298	295	292	415	496	540	372	309	304	301
MAX	313	306	303	322	314	472	613	617	493	331	318	306
MIN	286	294	295	287	285	388	449	478	300	290	295	295
AC-FT	18590	17860	18340	18140	16800	25520	29490	33230	22160	18980	18680	17930
MEAN a	56.9	160	3161	1682	1813	1800	2307	2291	1692	446	123	0
AC-FT a	3500	9520	194400	103400	104300	110700	137300	140900	100700	27430	7570	0

CAL YR 1987 TOTAL 155144 MEAN 425 MAX 820 MIN 286 AC-FT 307700 MEAN a 1425 AC-FT a 1032000
WTR YR 1988 TOTAL 128923 MEAN 352 MAX 617 MIN 285 AC-FT 255700 MEAN a 1293 AC-FT a 938900

a Adjusted for change in contents and evaporation from Clair Engle Lake and diversion to Judge Francis Carr powerplant. Adjustments provided by U.S. Bureau of Reclamation; evaporation adjustments not reviewed by U.S. Geological Survey.

NOTE:--When inflow to lake is small and other quantities large, discordant figures of net runoff may appear.

11525550 GRASS VALLEY CREEK NEAR FRENCH GULCH, CA

LOCATION.--Lat 40°36'52", long 122°44'43", in NW 1/4 SW 1/4, sec.23, T.32 N., R.8 W., Trinity County, Hydrologic Unit 18010211, on right bank 0.8 mi downstream from an unnamed perennial tributary, 7.1 mi southeast of Lewiston, and 10.6 mi east of Douglas City.

DRAINAGE AREA.--7.93 mi^2.

PERIOD OF RECORD.--
SEDIMENT DATA: Water years 1985 to current year.

REMARKS.--Record is collected for hydrologic and sediment-transport correlation studies with Grass Valley Creek at Fawn Lodge near Lewiston.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM % FINER THAN 1.00 MM
NOV										
05...	0840	6.5	6.0	2	0.04	--	--	--	--	--
DEC										
07...	0915	81	5.5	18	3.9	56	73	90	100	--
10...	0830	84	6.5	14	3.2	40	53	77	97	100
MAR										
07...	0905	25	3.5	2	0.13	--	--	--	--	--
APR										
06...	0905	17	6.0	2	0.09	--	--	--	--	--
20...	0850	58	5.5	12	1.9	66	--	--	--	--
MAY										
05...	0850	31	5.0	2	0.17	--	--	--	--	--
JUN										
01...	0925	21	9.0	3	0.17	68	--	--	--	--
06...	1005	21	7.0	4	0.23	61	--	--	--	--
JUL										
08...	0905	12	11.0	4	0.13	--	--	--	--	--
AUG										
08...	0845	8.3	11.5	1	0.02	--	--	--	--	--
SEP										
01...	0840	6.2	16.5	7	0.12	--	--	--	--	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	TEMPER-ATURE WATER (DEG C)	NUMBER OF SAM-PLING POINTS (COUNT)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
DEC												
10...	0845	6.5	1	84	4	19	42	56	74	83	88	100
10...	0850	6.5	1	84	2	5	13	37	84	100	--	--
10...	0855	6.5	1	84	1	16	56	88	98	100	--	--
MAY												
05...	0900	5.0	1	31	2	6	15	43	87	100	--	--
05...	0905	5.0	1	31	1	3	8	32	88	100	--	--
05...	0910	5.0	1	31	3	12	26	48	85	100	--	--

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	TEMPER-ATURE WATER (DEG C)	NUMBER OF SAM-PLING POINTS (COUNT)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	STREAM WIDTH (FT)	SEDI-MENT DIS-CHARGE, BEDLOAD (TONS/DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM
DEC												
07...	0930	5.5	16	81	25.0	13	1	5	32	76	98	100
APR												
20...	0905	5.5	17	57	25.0	7.5	1	9	27	60	94	100

11525580 LITTLE GRASS VALLEY CREEK NEAR LEWISTON, CA

LOCATION.--Lat 40°39'45", long 122°47'57", in NE 1/4 NW 1/4, sec.5, T.32 N., R.8 W., Trinity County, Hydrologic Unit 18010211, on left bank 0.2 mi upstream from the confluence with Grass Valley Creek, 0.9 mi west of Buckhorn Station, and 3.1 mi south of Lewiston on State Highway 299.

DRAINAGE AREA.--10.69 mi^2.

PERIOD OF RECORD.--
SEDIMENT DATA: Water years 1985 to current year.

REMARKS.--Record is collected for hydrologic and sediment-transport correlation studies with Grass Valley Creek at Fawn Lodge near Lewiston.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM
OCT										
01...	0825	1.2	9.0	2	0.01	--	--	--	--	--
NOV										
05...	0945	2.1	7.5	10	0.06	--	--	--	--	--
DEC										
07...	1030	8.4	6.0	46	1.0	41	53	75	93	100
10...	0945	14	7.0	62	2.3	46	58	80	97	100
JAN										
11...	0850	9.4	3.0	26	0.66	56	70	92	100	--
FEB										
10...	0920	6.5	3.0	6	0.10	--	--	--	--	--
MAR										
07...	1000	5.5	4.5	6	0.09	--	--	--	--	--
APR										
06...	0955	4.1	7.0	4	0.04	--	--	--	--	--
20...	1020	9.1	8.0	46	1.1	73	84	97	100	--
MAY										
05...	1005	4.6	7.0	5	0.06	--	--	--	--	--
JUN										
01...	1030	4.1	10.5	9	0.10	56	--	--	--	--
JUL										
08...	1015	2.5	13.0	6	0.04	--	--	--	--	--
AUG										
08...	0915	1.6	13.5	2	0.01	--	--	--	--	--
SEP										
01...	1000	1.2	14.5	6	0.02	--	--	--	--	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	TEMPER-ATURE WATER (DEG C)	NUMBER OF SAM-PLING POINTS (COUNT)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
DEC							
10...	1000	7.0	1	14	--	2	7
10...	1005	7.0	1	14	2	11	25
10...	1010	7.0	1	14	3	14	25
APR							
06...	1015	7.0	1	4.1	1	3	6
06...	1020	7.0	1	4.1	1	9	21
06...	1025	7.0	1	4.1	3	12	20

11525580 LITTLE GRASS VALLEY CREEK NEAR LEWISTON, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
DEC							
10...	17	35	72	96	99	100	--
10...	44	63	82	96	100	--	--
10...	36	56	85	99	100	--	--
APR							
06...	17	51	90	96	98	100	--
06...	35	50	71	85	90	90	100
06...	29	49	80	95	100	--	--

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	TEMPERATURE WATER (DEG C)	NUMBER OF SAMPLING POINTS (COUNT)	STREAMFLOW, INSTANTANEOUS (CFS)	STREAM WIDTH (FT)	SEDIMENT DISCHARGE, BEDLOAD (TONS/DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM
DEC												
07...	1035	6.0	14	8.4	9.50	17	2	10	35	69	95	100
APR												
20...	1030	8.0	15	9.1	9.60	3.4	3	17	39	66	93	100

11525600 GRASS VALLEY CREEK AT FAWN LODGE, NEAR LEWISTON, CA

LOCATION.--Lat 40°40'35", long 122°49'46", in SW 1/4, NE 1/4 sec.36, T.33 N., R.9 W., Trinity County, Hydrologic Unit 18010211, on right bank 0.1 mi upstream from Phillips Gulch and 2.5 mi southwest of Lewiston.

DRAINAGE AREA.--30.8 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1975 to current year.

REVISED RECORDS.--WDR CA-86-2: 1983(M)

GAGE.--Water-stage recorder. Datum of gage is 2,049.73 ft above National Geodetic Vertical Datum of 1929 (California State Highway Department bench mark).

REMARKS.--No estimated daily discharges. Records fair. No regulation; small pumping diversions above station.

AVERAGE DISCHARGE.--12 years (water years 1977-88), 48.5 ft^3/s, 35,140 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,140 ft^3/s, Feb. 28, 1983; gage height, 10.11 ft, from rating curve extended above 700 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 4.3 ft^3/s, many days in 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 220 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 6	1100	*441	*6.58				

Minimum daily, 7.4 ft^3/s, Sept. 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	11	31	26	40	38	28	40	30	18	11	7.9
2	7.7	10	41	26	37	36	28	38	29	18	11	7.8
3	7.8	11	49	29	35	35	29	37	30	18	11	7.7
4	7.8	10	69	35	34	36	29	35	31	17	11	7.6
5	7.7	10	81	32	32	36	29	36	36	17	11	7.4
6	7.6	10	208	30	31	36	28	35	34	17	11	7.4
7	7.6	11	94	30	31	35	28	49	33	20	11	7.6
8	7.9	11	78	32	30	35	28	46	32	20	11	7.6
9	7.9	16	91	49	30	35	28	45	32	20	10	7.6
10	8.1	14	107	56	32	34	27	43	31	18	10	7.9
11	8.4	14	76	64	32	34	27	43	28	18	10	7.8
12	8.7	14	62	48	32	34	27	44	27	18	10	7.8
13	9.0	15	53	44	32	33	27	44	26	17	10	7.8
14	8.9	13	48	47	32	32	27	42	25	17	11	7.9
15	8.8	13	46	56	32	32	27	41	25	17	11	8.0
16	9.0	13	43	48	32	31	27	41	24	16	10	8.0
17	9.0	15	39	42	31	31	27	39	24	16	9.8	8.1
18	9.3	14	36	37	31	30	28	37	23	15	9.7	8.2
19	9.5	13	34	35	30	31	62	37	23	15	9.5	8.3
20	9.4	20	32	32	30	31	73	36	22	14	9.3	8.7
21	9.2	23	33	31	31	31	54	35	21	13	9.1	8.7
22	9.6	17	32	30	31	30	55	34	21	13	9.1	8.5
23	11	16	31	30	30	30	54	33	20	13	8.9	8.6
24	11	16	30	29	30	30	51	32	20	13	8.9	8.6
25	10	16	30	29	30	30	47	32	20	13	8.9	8.7
26	10	16	28	29	30	30	45	31	20	13	8.5	9.0
27	9.8	15	28	31	32	30	44	30	19	15	8.4	8.9
28	9.9	14	29	35	36	30	43	32	19	13	8.2	8.8
29	11	14	28	48	37	30	44	31	19	12	8.1	8.4
30	12	21	27	50	---	29	42	30	19	12	8.0	8.1
31	11	---	26	44	---	29	---	30	---	11	8.1	---
TOTAL	282.5	426	1640	1184	933	1004	1113	1158	763	487	302.5	243.4
MEAN	9.11	14.2	52.9	38.2	32.2	32.4	37.1	37.4	25.4	15.7	9.76	8.11
MAX	12	23	208	64	40	38	73	49	36	20	11	9.0
MIN	7.6	10	26	26	30	29	27	30	19	11	8.0	7.4
AC-FT	560	845	3250	2350	1850	1990	2210	2300	1510	966	600	483

CAL YR 1987 TOTAL 10790.1 MEAN 29.6 MAX 406 MIN 6.2 AC-FT 21400
WTR YR 1988 TOTAL 9536.4 MEAN 26.1 MAX 208 MIN 7.4 AC-FT 18920

11525600 GRASS VALLEY CREEK AT FAWN LODGE, NEAR LEWISTON, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.
WATER TEMPERATURE: Water years 1976 to current year.
SEDIMENT DATA: Water years 1976 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: November 1975 to current year.

REMARKS.--Sediment samples were collected on most days where a water temperature is published.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATION: Maximum daily mean, 9,550 mg/L, Mar. 2, 1983; minimum daily mean, 0 mg/L during most years.
SEDIMENT LOAD: Maximum daily, 65,200 tons, Mar. 2, 1983; minimum daily, 0 ton during most years.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION: Maximum daily mean, 741 mg/L, Dec. 6; minimum daily mean, 0 mg/L several days during September.
SEDIMENT LOAD: Maximum daily, 528 tons, Dec. 6; minimum daily, 0 ton, several days during September.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.0	---	5.5	---	---	6.0	---	---	11.0	---	---	16.5
2	---	---	6.5	---	1.0	---	---	---	---	---	---	---
3	---	9.0	7.0	---	---	---	---	---	14.0	---	---	---
4	---	---	8.0	1.5	---	---	11.5	---	11.0	---	17.5	---
5	---	8.0	8.0	---	---	7.5	---	6.5	9.0	---	---	---
6	11.5	10.5	7.5	---	---	---	8.0	---	8.5	17.0	---	---
7	---	---	6.0	---	---	5.0	---	6.0	---	---	---	---
8	---	---	5.0	3.5	4.0	---	10.5	---	9.0	15.0	16.0	---
9	13.5	9.0	5.0	---	---	---	---	8.0	---	---	---	17.5
10	---	---	7.0	5.0	3.5	4.5	---	---	14.0	---	---	---
11	13.5	---	4.5	3.0	5.5	---	---	---	---	---	13.0	---
12	---	8.0	---	4.0	---	---	---	12.5	---	19.0	---	---
13	---	10.0	3.0	---	---	6.5	10.5	7.5	---	---	---	12.0
14	9.5	---	---	5.5	---	---	11.0	---	---	---	---	---
15	---	---	---	---	3.5	---	---	---	---	20.0	---	11.0
16	8.0	7.5	---	---	---	7.0	---	---	15.5	---	---	---
17	---	8.0	---	4.5	---	---	---	---	---	---	13.0	---
18	---	---	4.5	---	---	---	10.0	---	---	---	---	---
19	---	---	---	---	---	---	9.5	9.0	---	---	---	10.0
20	---	8.5	---	---	5.0	---	7.5	---	---	17.5	---	---
21	---	---	---	---	---	8.0	---	---	15.0	---	19.5	11.5
22	11.5	---	5.0	3.0	---	---	7.5	---	---	---	---	---
23	12.0	---	---	---	5.5	---	5.5	---	---	---	---	13.5
24	---	---	---	---	---	5.0	---	9.5	---	21.0	20.0	---
25	---	---	---	---	---	---	---	14.0	---	---	---	---
26	---	---	---	4.0	5.5	---	---	---	18.0	22.0	---	12.5
27	---	3.5	---	---	---	8.0	9.0	---	---	---	---	---
28	11.0	---	---	4.5	8.5	---	---	11.5	---	22.0	20.5	---
29	---	---	---	5.0	7.0	---	9.0	---	---	---	---	10.0
30	12.0	4.5	3.0	---	---	---	---	---	15.0	---	20.0	---
31	---	---	---	---	---	9.5	---	10.0	---	22.0	20.0	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

KLAMATH RIVER BASIN

11525600 GRASS VALLEY CREEK AT FAWN LODGE, NEAR LEWISTON, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	7.9	3	.06	11	6	.18	31	24	2.4
2	7.7	3	.06	10	5	.14	41	47	5.2
3	7.8	2	.04	11	4	.12	49	56	8.5
4	7.8	2	.04	10	3	.08	69	176	41
5	7.7	1	.02	10	3	.08	81	160	35
6	7.6	1	.02	10	1	.03	208	741	528
7	7.6	2	.04	11	1	.03	94	320	81
8	7.9	2	.04	11	2	.06	78	213	45
9	7.9	3	.06	16	4	.17	91	189	47
10	8.1	2	.04	14	2	.08	107	275	81
11	8.4	1	.02	14	2	.08	76	210	43
12	8.7	1	.02	14	1	.04	62	118	20
13	9.0	1	.02	15	2	.08	53	69	9.9
14	8.9	1	.02	13	2	.07	48	44	5.7
15	8.8	2	.05	13	2	.07	46	32	4.0
16	9.0	3	.07	13	2	.07	43	25	2.9
17	9.0	3	.07	15	3	.12	39	21	2.2
18	9.3	3	.08	14	3	.11	36	17	1.7
19	9.5	3	.08	13	2	.07	34	16	1.5
20	9.4	3	.08	20	11	.74	32	15	1.3
21	9.2	3	.07	23	3	.19	33	14	1.2
22	9.6	3	.08	17	2	.09	32	12	1.0
23	11	6	.18	16	1	.04	31	11	.92
24	11	5	.15	16	1	.04	30	11	.89
25	10	4	.11	16	1	.04	30	10	.81
26	10	4	.11	16	1	.04	28	11	.83
27	9.8	3	.08	15	1	.04	28	11	.83
28	9.9	3	.08	14	1	.04	29	12	.94
29	11	4	.12	14	1	.04	28	12	.91
30	12	10	.32	21	5	.28	27	12	.87
31	11	8	.24	---	---	---	26	13	.91
TOTAL	282.5	---	2.47	426	---	3.26	1640	---	976.41

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JANUARY			FEBRUARY			MARCH	
1	26	14	.98	40	2	.22	38	11	1.1
2	26	14	.98	37	2	.20	36	9	.87
3	29	20	1.6	35	2	.19	35	10	.95
4	35	27	2.6	34	2	.18	36	10	.97
5	32	27	2.3	32	2	.17	36	11	1.1
6	30	23	1.9	31	2	.17	36	7	.63
7	30	18	1.5	31	2	.17	35	4	.38
8	32	20	1.7	30	3	.24	35	4	.38
9	49	66	8.7	30	4	.32	35	5	.47
10	56	84	13	32	6	.52	34	6	.55
11	64	87	15	32	9	.78	34	5	.46
12	48	22	2.9	32	8	.69	34	5	.46
13	44	7	.83	32	6	.69	33	4	.36
14	47	20	2.5	32	7	.60	32	4	.35
15	56	67	10	32	6	.52	32	5	.43
16	48	29	3.8	32	5	.43	31	5	.42
17	42	12	1.4	31	4	.33	31	5	.42
18	37	6	.60	31	3	.25	30	5	.41
19	35	5	.47	30	2	.16	31	5	.42
20	32	5	.43	30	1	.08	31	4	.33
21	31	4	.33	31	1	.08	31	4	.33
22	30	4	.32	31	1	.08	30	4	.32
23	30	5	.41	30	1	.08	30	3	.24
24	29	6	.47	30	2	.16	30	3	.24
25	29	7	.55	30	2	.16	30	4	.32
26	29	8	.63	30	3	.24	30	4	.32
27	31	8	.67	32	4	.35	30	5	.41
28	35	9	.85	38	11	1.1	30	5	.41
29	48	25	3.2	37	8	.80	30	5	.41
30	50	14	1.9	---	---	---	29	5	.39
31	44	6	.71	---	---	---	29	5	.39
TOTAL	1184	---	83.23	933	---	9.96	1004	---	15.29

11525600 GRASS VALLEY CREEK AT FAWN LODGE, NEAR LEWISTON, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL			MAY			JUNE	
1	28	5	.38	40	6	.65	30	9	.73
2	28	4	.30	38	6	.62	29	8	.63
3	29	4	.31	37	6	.60	30	10	.81
4	29	3	.23	35	6	.57	31	13	1.1
5	29	3	.23	36	6	.58	36	17	1.7
6	28	2	.15	35	7	.66	34	5	.46
7	28	1	.08	49	14	1.9	33	4	.36
8	28	1	.08	46	8	.99	32	4	.35
9	28	1	.08	45	7	.85	32	3	.26
10	27	1	.07	43	7	.81	31	3	.25
11	27	2	.15	43	6	.70	28	3	.23
12	27	2	.15	44	9	1.1	27	2	.15
13	27	2	.15	44	11	1.3	26	2	.14
14	27	4	.29	42	8	.91	25	2	.14
15	27	5	.36	41	7	.77	25	2	.14
16	27	6	.44	41	6	.66	24	2	.13
17	27	7	.51	39	6	.63	24	2	.13
18	28	8	.60	37	5	.50	23	2	.12
19	62	158	33	37	4	.40	23	3	.19
20	73	105	21	36	4	.39	22	3	.18
21	54	44	6.4	35	4	.38	21	4	.23
22	55	38	5.6	34	4	.37	21	4	.23
23	54	27	3.9	33	4	.36	20	4	.22
24	51	17	2.3	32	5	.43	20	3	.16
25	47	10	1.3	32	6	.52	20	3	.16
26	45	7	.85	31	7	.59	20	3	.16
27	44	6	.71	30	7	.57	19	3	.15
28	43	6	.70	32	7	.60	19	2	.10
29	44	6	.71	31	9	.75	19	2	.10
30	42	6	.68	30	10	.81	19	2	.10
31	---	---	---	30	12	.97	---	---	---
TOTAL	1113	---	81.71	1158	---	21.94	763	---	9.81
		JULY			AUGUST			SEPTEMBER	
1	18	2	.10	11	2	.06	7.9	1	.02
2	18	2	.10	11	2	.06	7.8	1	.02
3	18	1	.05	11	1	.03	7.7	1	.02
4	17	1	.05	11	1	.03	7.6	1	.02
5	17	1	.05	11	1	.03	7.4	1	.02
6	17	1	.05	11	1	.03	7.4	1	.02
7	20	2	.11	11	2	.06	7.6	1	.02
8	20	4	.22	11	2	.06	7.6	0	.00
9	20	4	.22	10	2	.05	7.6	0	.00
10	18	4	.19	10	1	.03	7.9	2	.04
11	18	5	.24	10	1	.03	7.8	3	.06
12	18	5	.24	10	1	.03	7.8	3	.06
13	17	5	.23	10	1	.03	7.8	4	.08
14	17	5	.23	11	1	.03	7.9	4	.09
15	17	5	.23	11	1	.03	8.0	4	.09
16	16	5	.22	10	1	.03	8.0	4	.09
17	16	5	.22	9.8	1	.03	8.1	4	.09
18	15	5	.20	9.7	1	.03	8.2	4	.09
19	15	6	.24	9.5	1	.03	8.3	4	.09
20	14	6	.23	9.3	1	.03	8.7	4	.09
21	13	6	.21	9.1	1	.02	8.7	3	.07
22	13	5	.18	9.1	1	.02	8.5	3	.07
23	13	4	.14	8.9	1	.02	8.6	2	.05
24	13	4	.14	8.9	1	.02	8.6	2	.05
25	13	4	.14	8.9	1	.02	8.7	1	.02
26	13	5	.18	8.5	1	.02	9.0	0	.00
27	15	5	.20	8.4	1	.02	8.9	0	.00
28	13	5	.18	8.2	1	.02	8.8	0	.00
29	12	4	.13	8.1	1	.02	8.4	0	.00
30	12	3	.10	8.0	1	.02	8.1	1	.02
31	11	2	.06	8.1	2	.04	---	---	---
TOTAL	487	---	5.08	302.5	---	0.98	243.4	---	1.29
YEAR	9536.4		1211.43						

11525600 GRASS VALLEY CREEK AT FAWN LODGE, NEAR LEWISTON, CA--Continued

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1987	282.50	2.47	0	2
NOVEMBER....	426.00	3.26	0	3
DECEMBER....	1640.00	976.41	76	1050
JANUARY 1988	1184.00	83.23	3	86
FEBRUARY....	933.00	9.96	0	10
MARCH.......	1004.00	15.29	0	15
APRIL.......	1113.00	81.71	4	86
MAY.........	1158.00	21.94	2	24
JUNE........	763.00	9.81	0	10
JULY........	487.00	5.08	0	5
AUGUST......	302.50	0.98	0	1
SEPTEMBER...	243.40	1.29	0	1
TOTAL.......	9536.40	1211.43	85	1293

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
DEC											
04...	1315	52	8.0	278	39	37	49	66	84	95	100
07...	1200	87	6.0	240	56	9	11	17	38	68	100
10...	1045	116	7.0	223	70	7	9	16	36	70	91
APR											
20...	1145	71	7.5	54	10	26	36	45	70	100	--
MAY											
05...	1100	36	6.5	6	0.58	31	54	80	100	--	--
JUN											
01...	1145	31	11.0	9	0.75	23	--	--	--	--	--
01...	1150	31	11.0	6	0.50	42	--	--	--	--	--
08...	1230	33	9.0	19	1.7	44	--	--	--	--	--
JUL											
08...	1130	22	15.0	5	0.30	59	--	--	--	--	--

11525600 GRASS VALLEY CREEK AT FAWN LODGE, NEAR LEWISTON, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	TEMPERATURE WATER (DEG C)	NUMBER OF SAMPLING POINTS (COUNT)	STREAMFLOW, INSTANTANEOUS (CFS)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
DEC							
10...	1100	7.0	1	116	--	--	3
10...	1105	7.0	1	116	--	--	2
10...	1110	7.0	1	116	--	--	2
10...	1115	7.0	1	116	--	1	3
10...	1120	7.0	1	116	1	3	10

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
DEC						
10...	8	17	33	39	40	100
10...	4	12	39	51	55	100
10...	11	38	83	97	97	100
10...	11	36	83	99	100	--
10...	26	57	89	96	98	100

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	TEMPERATURE WATER (DEG C)	NUMBER OF SAMPLING POINTS (COUNT)	STREAMFLOW, INSTANTANEOUS (CFS)	STREAM WIDTH (FT)	SEDIMENT DISCHARGE, BEDLOAD (TONS/DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM
DEC												
07...	1215	6.0	20	87	31.0	84	1	9	33	69	94	100

11525655 TRINITY RIVER BELOW LIMEKILN GULCH, NEAR DOUGLAS CITY, CA

LOCATION.--Lat 40°40'21", long 122°55'07", in SW 1/4 NW 1/4 sec.32, T.33 N., R.9 W., Trinity County, Hydrologic Unit 18010211, on left bank 1.8 mi northeast of Douglas City, 11.3 mi downstream from Lewiston Diversion Dam, and 2.3 mi downstream from Limekiln Gulch.

DRAINAGE AREA.--812 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1981 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,650 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Clair Engle Lake (station 11525400) and transbasin diversion to Judge Francis Carr powerplant (station 11525430). Small diversion for irrigation above station.

AVERAGE DISCHARGE.--7 years, 834 ft^3/s, 604,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,070 ft^3/s, June 12, 1983, gage height, 10.45 ft; minimum daily, 286 ft^3/s, Nov. 4, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,080 ft^3/s, Dec. 6, gage height, 6.01 ft; minimum daily, 295 ft^3/s, Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	303	323	376	536	417	491	473	660	610	330	311	302
2	306	325	693	334	405	528	500	656	573	340	311	301
3	307	324	632	369	399	522	501	652	548	344	310	298
4	307	324	674	447	389	518	501	647	513	344	312	298
5	307	325	566	407	379	500	513	644	472	344	313	298
6	295	325	788	385	374	484	513	640	463	344	316	300
7	311	325	561	373	371	479	511	669	463	338	316	307
8	311	325	490	378	366	479	496	677	463	330	316	307
9	315	325	598	516	366	479	496	672	463	339	312	307
10	311	325	875	571	369	478	496	660	463	339	307	307
11	311	325	599	658	372	467	501	660	463	339	307	307
12	304	322	480	503	372	463	501	670	463	335	307	307
13	296	320	434	457	372	461	500	705	460	320	307	307
14	302	320	408	472	372	457	496	630	452	320	305	307
15	302	320	395	580	372	457	496	572	452	320	302	307
16	302	324	387	535	372	457	496	597	452	324	302	306
17	303	325	375	496	363	454	496	579	452	314	308	302
18	305	325	371	452	360	469	545	564	405	307	316	302
19	298	325	365	429	358	457	637	554	343	307	315	302
20	307	329	361	408	358	445	718	554	338	307	311	302
21	307	331	358	398	358	447	655	554	334	307	311	302
22	309	330	358	390	358	447	643	553	334	307	314	302
23	320	332	354	382	358	447	653	548	334	307	314	302
24	320	332	350	382	358	451	640	546	334	307	311	302
25	320	330	348	382	363	436	634	535	330	312	311	302
26	320	330	348	382	373	436	620	525	330	311	309	304
27	319	330	346	385	372	441	620	527	330	318	307	308
28	318	330	344	397	379	440	615	534	330	316	307	306
29	321	330	344	438	391	436	638	558	330	316	306	302
30	322	333	342	452	---	436	664	540	330	316	302	299
31	320	---	339	437	---	435	---	535	---	311	302	---
TOTAL	9599	9789	14259	13531	10816	14397	16768	18617	12627	10013	9598	9103
MEAN	310	326	460	436	373	464	559	601	421	323	310	303
MAX	322	333	875	658	417	528	718	705	610	344	316	308
MIN	295	320	339	334	358	435	473	525	330	307	302	298
AC-FT	19040	19420	28280	26840	21450	28560	33260	36930	25050	19860	19040	18060

CAL YR 1987 TOTAL 176051 MEAN 482 MAX 931 MIN 295 AC-FT 349200
WTR YR 1988 TOTAL 149117 MEAN 407 MAX 875 MIN 295 AC-FT 295800

11525655 TRINITY RIVER BELOW LIMEKILN GULCH, NEAR DOUGLAS CITY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1981 to current year.
WATER TEMPERATURE: Water years 1981 to current year.
SEDIMENT DATA: Water years 1981 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: April 1981 to current year.

REMARKS.--Sediment samples were collected most days where a water temperature is published.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATION: Maximum daily mean, 1,990 mg/L, Feb. 14, 1986; minimum daily mean, 0 mg/L, several days most years.
SEDIMENT LOAD: Maximum daily, 17,300 tons, Feb. 14, 1986; minimum daily, 0 ton, several days most years.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION: Maximum daily mean, 40 mg/L, Dec. 10; minimum daily mean, 0 mg/L Feb. 20, June 10, 16, 21, 26.
SEDIMENT LOAD: Maximum daily, 101 tons, Dec. 10; minimum daily, 0 ton, Feb. 20, June 10, 16, 21, 26.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	---	7.0	---	---	7.0	---	---	12.5	---	---	11.5
2	---	---	7.0	---	4.5	---	---	---	---	---	---	---
3	---	9.5	7.5	---	---	---	---	---	---	---	---	---
4	---	---	7.5	5.5	---	---	11.5	---	12.5	---	13.0	---
5	---	8.0	8.0	---	---	9.0	---	10.5	11.0	---	---	---
6	9.5	9.5	8.0	---	---	---	10.5	---	---	18.0	---	---
7	---	---	7.0	---	---	8.5	---	9.0	---	---	---	---
8	---	---	6.5	6.0	6.0	---	11.0	---	11.5	15.5	12.0	---
9	---	9.0	6.5	---	---	---	---	9.5	---	---	---	14.0
10	---	---	7.0	6.0	6.0	7.5	---	---	15.0	---	---	---
11	10.5	---	5.5	6.0	6.0	---	---	---	---	---	13.0	---
12	---	9.0	---	6.0	---	---	---	---	---	16.0	---	---
13	---	9.0	4.5	---	---	10.5	11.0	9.0	---	---	---	10.0
14	10.0	---	---	6.5	---	---	11.0	---	---	---	---	---
15	---	---	---	---	5.5	---	---	---	---	16.0	---	10.0
16	8.5	8.5	---	---	---	10.5	---	---	15.0	---	---	---
17	---	---	---	6.0	---	---	---	---	---	---	11.0	---
18	---	---	5.5	---	---	---	9.5	---	---	---	---	---
19	---	---	---	---	---	---	9.5	10.5	---	---	---	10.0
20	---	8.5	---	---	7.5	---	10.0	---	---	13.0	---	---
21	---	---	---	---	---	9.5	---	---	15.0	---	14.5	10.0
22	10.0	---	6.0	5.0	---	---	8.5	---	---	---	---	---
23	10.0	8.0	---	---	7.5	---	8.0	---	---	---	---	12.0
24	---	---	---	---	---	8.0	---	12.0	---	15.0	13.5	---
25	---	---	---	---	---	---	---	12.5	---	---	---	---
26	---	---	---	6.0	7.5	---	---	---	18.5	14.0	---	10.5
27	---	---	---	---	---	10.5	10.0	---	---	---	---	---
28	9.5	6.5	---	6.0	9.5	---	---	12.0	---	15.5	14.5	---
29	---	---	---	6.5	8.0	---	10.5	---	---	---	---	9.5
30	10.0	7.0	6.0	---	---	---	---	---	14.5	---	14.5	---
31	---	---	---	---	---	10.5	---	11.0	---	15.0	15.0	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

11525655 TRINITY RIVER BELOW LIMEKILN GULCH, NEAR DOUGLAS CITY, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	303	2	1.6	323	5	4.4	376	4	4.1
2	306	2	1.7	325	5	4.4	693	31	58
3	307	2	1.7	324	5	4.4	632	9	15
4	307	2	1.7	324	4	3.5	674	16	32
5	307	2	1.7	325	2	1.8	566	7	11
6	295	2	1.6	325	2	1.8	788	36	87
7	311	3	2.5	325	2	1.8	561	8	12
8	311	3	2.5	325	3	2.6	490	5	6.6
9	315	3	2.6	325	3	2.6	598	6	9.7
10	311	4	3.4	325	3	2.6	875	40	101
11	311	4	3.4	325	2	1.8	599	8	13
12	304	4	3.3	322	2	1.7	480	3	3.9
13	296	5	4.0	320	2	1.7	434	3	3.5
14	302	5	4.1	320	2	1.7	408	3	3.3
15	302	5	4.1	320	2	1.7	395	4	4.3
16	302	4	3.3	324	2	1.7	387	4	4.2
17	303	4	3.3	325	2	1.8	375	4	4.1
18	305	4	3.3	325	2	1.8	371	4	4.0
19	298	4	3.2	325	1	.88	365	4	3.9
20	307	5	4.1	329	1	.89	361	4	3.9
21	307	5	4.1	331	1	.89	358	4	3.9
22	309	5	4.2	330	1	.89	358	4	3.9
23	320	4	3.5	332	1	.90	354	4	3.8
24	320	4	3.5	332	1	.90	350	3	2.8
25	320	4	3.5	330	1	.89	348	3	2.8
26	320	4	3.5	330	1	.89	348	2	1.9
27	319	4	3.4	330	1	.89	346	2	1.9
28	318	4	3.4	330	1	.89	344	2	1.9
29	321	4	3.5	330	1	.89	344	1	.93
30	322	4	3.5	333	1	.90	342	1	.92
31	320	4	3.5	---	---	---	339	1	.92
TOTAL	9599	---	96.7	9789	---	54.50	14259	---	410.17
		JANUARY			FEBRUARY			MARCH	
1	336	1	.91	417	3	3.4	491	4	5.3
2	334	1	.90	405	3	3.3	528	2	2.9
3	369	4	4.0	399	3	3.2	522	2	2.8
4	447	8	9.7	389	3	3.2	518	2	2.8
5	407	5	5.5	379	3	3.1	500	2	2.7
6	385	4	4.2	374	3	3.0	484	2	2.6
7	373	2	2.0	371	3	3.0	479	2	2.6
8	378	2	2.0	366	3	3.0	479	2	2.6
9	516	8	11	366	3	3.0	479	3	3.9
10	571	8	12	369	2	2.0	478	4	5.2
11	658	10	18	372	2	2.0	467	3	3.8
12	503	5	6.8	372	2	2.0	463	3	3.8
13	457	5	6.2	372	2	2.0	461	2	2.5
14	472	6	7.6	372	1	1.0	457	2	2.5
15	580	7	11	372	1	1.0	457	3	3.7
16	535	4	5.8	372	1	1.0	457	4	4.9
17	496	3	4.0	363	1	.98	454	4	4.9
18	452	3	3.7	360	1	.97	469	5	6.3
19	429	3	3.5	358	1	.97	457	5	6.2
20	408	3	3.3	358	0	.00	445	5	6.0
21	398	2	2.1	358	1	.97	447	5	6.0
22	390	2	2.1	358	3	2.9	447	5	6.0
23	382	2	2.1	358	4	3.9	447	6	7.2
24	382	3	3.1	358	3	2.9	451	6	7.3
25	382	3	3.1	363	2	2.0	436	6	7.1
26	382	3	3.1	373	1	1.0	436	5	5.9
27	385	3	3.1	372	2	2.0	441	5	6.0
28	397	2	2.1	379	2	2.0	440	4	4.8
29	438	3	3.5	391	1	1.1	436	4	4.7
30	452	3	3.7	---	---	---	436	3	3.5
31	437	3	3.5	---	---	---	435	2	2.3
TOTAL	13531	---	153.61	10816	---	60.89	14397	---	138.8

11525655 TRINITY RIVER BELOW LIMEKILN GULCH, NEAR DOUGLAS CITY, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL			MAY			JUNE	
1	473	2	2.6	660	3	5.3	610	5	8.2
2	500	3	4.1	656	3	5.3	573	4	6.2
3	501	3	4.1	652	4	7.0	548	2	3.0
4	501	3	4.1	647	4	7.0	513	1	1.4
5	513	3	4.2	644	4	7.0	472	1	1.3
6	513	3	4.2	640	4	6.9	463	1	1.3
7	511	3	4.1	669	4	7.2	463	1	1.3
8	496	2	2.7	677	3	5.5	463	1	1.3
9	496	2	2.7	672	2	3.6	463	1	1.3
10	496	2	2.7	660	2	3.6	463	0	.00
11	501	2	2.7	660	3	5.3	463	1	1.3
12	501	2	2.7	670	3	5.4	463	1	1.3
13	500	2	2.7	705	4	7.6	460	1	1.2
14	496	2	2.7	630	4	6.8	452	1	1.2
15	496	2	2.7	572	3	4.6	452	1	1.2
16	496	2	2.7	597	2	3.2	452	0	.00
17	496	2	2.7	579	2	3.1	452	1	1.2
18	545	2	2.9	564	1	1.5	405	1	1.1
19	637	14	26	554	1	1.5	343	1	.93
20	718	14	27	554	1	1.5	338	1	.91
21	655	6	11	554	1	1.5	334	0	.00
22	643	4	6.9	553	2	3.0	334	1	.90
23	653	4	7.1	548	2	3.0	334	1	.90
24	640	4	6.9	546	2	2.9	334	1	.90
25	634	4	6.8	535	5	7.2	330	1	.89
26	620	3	5.0	525	5	7.1	330	0	.00
27	620	3	5.0	527	6	8.5	330	1	.89
28	615	2	3.3	534	6	8.7	330	1	.89
29	638	2	3.4	558	6	9.0	330	1	.89
30	664	2	3.6	540	5	7.3	330	1	.89
31	---	---	---	535	5	7.2	---	---	---
TOTAL	16768	---	169.3	18617	---	164.3	12627	---	42.79
		JULY			AUGUST			SEPTEMBER	
1	330	1	.89	311	2	1.7	302	1	.82
2	340	1	.92	311	2	1.7	301	1	.81
3	344	1	.93	310	2	1.7	298	1	.80
4	344	1	.93	312	2	1.7	298	1	.80
5	344	1	.93	313	2	1.7	298	1	.80
6	344	1	.93	316	2	1.7	300	1	.81
7	338	2	1.8	316	2	1.7	307	1	.83
8	330	4	3.6	316	2	1.7	307	1	.83
9	339	4	3.7	312	2	1.7	307	1	.83
10	339	4	3.7	307	2	1.7	307	2	1.7
11	339	4	3.7	307	2	1.7	307	3	2.5
12	335	4	3.6	307	2	1.7	307	4	3.3
13	320	3	2.6	307	2	1.7	307	4	3.3
14	320	2	1.7	305	2	1.6	307	3	2.5
15	320	2	1.7	302	2	1.6	307	3	2.5
16	324	2	1.7	302	3	2.4	306	3	2.5
17	314	2	1.7	308	3	2.5	302	3	2.4
18	307	3	2.5	316	3	2.6	302	3	2.4
19	307	3	2.5	315	3	2.6	302	3	2.4
20	307	3	2.5	311	3	2.5	302	2	1.6
21	307	3	2.5	311	3	2.5	302	2	1.6
22	307	2	1.7	314	3	2.5	302	2	1.6
23	307	2	1.7	314	3	2.5	302	2	1.6
24	307	2	1.7	311	3	2.5	302	2	1.6
25	312	2	1.7	311	3	2.5	302	2	1.6
26	311	2	1.7	309	3	2.5	304	2	1.6
27	318	2	1.7	307	3	2.5	308	3	2.5
28	316	3	2.6	307	3	2.5	306	3	2.5
29	316	3	2.6	306	3	2.5	302	4	3.3
30	316	3	2.6	302	3	2.4	299	4	3.2
31	311	2	1.7	302	3	2.4	---	---	---
TOTAL	10013	---	64.73	9598	---	65.2	9103	---	55.53
YEAR	149117		1476.52						

11525655 TRINITY RIVER BELOW LIMEKILN GULCH, NEAR DOUGLAS CITY, CA--Continued

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1987	9599.00	96.70	0	97
NOVEMBER....	9789.00	54.50	0	54
DECEMBER....	14259.00	410.17	0	411
JANUARY 1988	13531.00	153.61	0	154
FEBRUARY....	10816.00	60.89	0	61
MARCH.......	14397.00	138.80	0	139
APRIL.......	16768.00	169.30	0	169
MAY.........	18617.00	164.30	0	164
JUNE........	12627.00	42.79	0	43
JULY........	10013.00	64.73	0	65
AUGUST......	9598.00	65.20	0	65
SEPTEMBER...	9103.00	55.53	0	56
TOTAL.......	149117.00	1476.52	0	1478

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM
DEC									
04...	1400	827	7.5	26	58	82	--	--	--
07...	1400	535	7.0	6	8.7	88	91	94	100
10...	1300	1020	7.0	72	198	91	96	99	100
JAN									
11...	1210	653	6.0	9	16	96	--	--	--
APR									
20...	1300	715	10.0	10	19	91	--	--	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	TEMPER-ATURE WATER (DEG C)	NUMBER OF SAM-PLING POINTS (COUNT)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM
AUG								
08...	1230	12.0	1	316	1	3	6	9
08...	1235	12.0	1	316	1	2	4	8
08...	1240	12.0	1	316	1	2	6	10
08...	1245	12.0	1	316	--	1	3	5
08...	1250	12.0	1	316	--	1	2	4

DATE	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 128 MM
AUG							
08...	13	19	25	34	81	100	--
08...	9	10	11	14	28	55	100
08...	13	15	16	21	42	58	100
08...	9	13	15	19	38	72	100
08...	6	9	11	15	28	64	100

11527000 TRINITY RIVER NEAR BURNT RANCH, CA

LOCATION.--Lat 40°47'20", long 123°26'20", in S 1/2 sec.19, T.5 N., R.7 E., Trinity County, Hydrologic Unit 18010211, Trinity National Forest, on left bank 500 ft upstream from Cedar Flat Creek, 700 ft upstream from highway bridge at Cedar Flat, and 2.3 mi southeast of town of Burnt Ranch.

DRAINAGE AREA.--1,439 mi^2.

PERIOD OF RECORD.--October 1931 to September 1940, October 1956 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.--WDR CA-78-2: 1975 (M). WSP 1929: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 944.05 ft above National Geodetic Vertical Datum of 1929. Oct. 1, 1931, to Jan. 19, 1940, at site 2 mi upstream at different datum.

REMARKS.--Estimated daily discharges: Oct. 7 to Nov. 19, Nov. 28 to Dec. 1, Feb. 20-24, and Feb. 27 to Mar. 28. Records good except those for missing periods, which are fair. Flow regulated since November 1960 by Clair Engle Lake (station 11525400), 64 mi upstream, and by transbasin diversion to Judge Francis Carr powerplant (station 11525430) since April 1963. Small diversions above station for irrigation.

AVERAGE DISCHARGE.--13 years (water years 1932-40, 1957-60), 2,785 ft^3/s, 2,016,000 acre-ft/yr; 25 years (water years 1964-88), 1,757 ft^3/s, 1,273,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 81,500 ft^3/s, Feb. 25, 1958, gage height, 30.50 ft, from rating curve extended above 40,000 ft^3/s on basis of slope-area measurement at gage height 43.2 ft; minimum, 82 ft^3/s, Aug. 31, 1939.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1955, reached a stage of 43.2 ft, from floodmarks, discharge, 172,000 ft^3/s, on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,300 ft^3/s, Dec. 10, gage height, 12.99 ft; minimum daily, 306 ft^3/s, Sept. 12-18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	337	348	700	759	2170	1620	897	1410	1910	614	377	313
2	336	343	5590	742	1920	1650	978	1340	2040	628	370	311
3	338	340	4330	815	1730	1600	1020	1290	1630	640	367	311
4	338	340	4870	1290	1590	1520	1070	1240	1540	626	364	309
5	338	345	3930	1420	1490	1630	1010	1240	1360	610	368	308
6	339	340	5450	1190	1410	1590	1010	1230	1320	595	383	308
7	341	378	4310	1070	1350	1490	1030	1390	1330	584	374	311
8	341	380	3280	1120	1330	1420	1010	1540	1340	575	367	314
9	340	375	5190	2130	1450	1380	959	1490	1310	576	361	314
10	340	370	11100	3550	1660	1320	959	1470	1380	574	350	314
11	340	375	5490	5030	1670	1250	1010	1520	1340	565	343	313
12	340	400	3440	3210	1690	1200	1080	1620	1310	555	343	306
13	340	432	2480	2670	1700	1160	1140	1980	1280	531	343	306
14	330	390	1340	4180	1620	1120	1120	1650	1270	512	343	306
15	336	380	1670	4270	1540	1080	1050	1480	1330	511	343	306
16	338	410	1490	3520	1500	1050	1020	1670	1370	502	343	306
17	340	430	1320	2550	1440	1030	1060	1700	1320	489	343	306
18	340	410	1200	2140	1380	1030	1030	1440	1280	466	347	306
19	330	420	1110	1900	1310	1020	1240	1350	1210	458	353	309
20	322	432	1040	1750	1290	1010	1980	1340	1160	443	341	312
21	320	450	1020	1650	1290	1040	1730	1400	1130	436	339	316
22	320	438	1040	1660	1290	1050	1510	1470	1080	432	337	317
23	325	412	1020	1830	1280	1080	1500	1390	1020	427	336	317
24	340	401	972	1980	1310	1020	1450	1290	985	420	334	317
25	340	398	940	2090	1280	1000	1410	1270	929	415	331	317
26	335	392	910	2210	1270	980	1390	1280	863	420	328	317
27	335	388	872	2320	1310	1030	1430	1170	713	410	328	317
28	330	370	862	2390	1320	1000	1510	1200	659	404	328	317
29	330	365	847	2640	1420	951	1560	1260	636	398	325	317
30	338	430	811	2770	---	930	1550	1070	618	392	315	314
31	350	---	784	2470	---	900	---	997	---	384	314	---
TOTAL	10407	11682	80008	69316	43010	37151	36713	43187	36663	15592	10738	9355
MEAN	336	389	2581	2236	1483	1198	1224	1393	1222	503	346	312
MAX	350	450	11100	5030	2170	1650	1980	1980	2040	640	383	317
MIN	320	340	700	742	1270	900	897	997	618	384	314	306
AC-FT	20640	23170	158700	137500	85310	73690	72820	85660	72720	30930	21300	18560

CAL YR 1987 TOTAL 465951 MEAN 1277 MAX 11100 MIN 320 AC-FT 924200
WTR YR 1988 TOTAL 403822 MEAN 1103 MAX 11100 MIN 306 AC-FT 801000

11528700 SOUTH FORK TRINITY RIVER BELOW HYAMPOM, CA

LOCATION.--Lat 40°38'00", long 123°28'15", in NW 1/4 SW 1/4 sec.10, T.3 N., R.6 E., Trinity County, Hydrologic Unit 18010212, Trinity National Forest, on left bank 0.1 mi downstream from Big Creek, 1.0 mi northeast of Hyampom, and 1.5 mi downstream from Hayfork Creek.

DRAINAGE AREA.--764 mi².

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,211.37 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 28-29, Jan. 28 to Feb. 2, Mar. 27, 28. Records fair except flows below 50 ft³/s, which are poor. No regulation or diversion above station.

AVERAGE DISCHARGE.--23 years, 1,468 ft³/s, 1,064,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,000 ft³/s, Feb. 17, 1986, gage height, 35.67 ft, from rating curve extended above 15,000 ft³/s on basis of slope-area measurement of peak flow; maximum gage height, 38.00 ft, Jan. 26, 1983; minimum daily, 14 ft³/s, Aug. 24, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 40.45 ft, from floodmarks, discharge, 88,000 ft³/s, on basis of flood-routing study.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 6	2000	10,500	19.10	Dec. 10	1230	*18,000	*23.11

Minimum daily, 17 ft³/s, Oct. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	40	470	660	2600	1120	416	550	476	185	60	24
2	19	50	1210	649	2250	1220	411	422	506	182	64	24
3	18	50	2000	770	1900	1120	416	402	412	170	66	22
4	18	50	3300	1100	1050	1030	414	383	377	174	58	21
5	18	51	2050	1210	1530	1100	412	400	394	170	58	20
6	19	52	5050	1060	1400	1060	404	407	430	162	58	20
7	17	50	4850	1010	1310	1010	404	477	402	160	62	19
8	18	50	2810	1150	1270	953	381	533	400	152	60	19
9	19	60	3310	2060	1370	920	380	403	470	140	57	20
10	19	64	14100	3640	1530	882	380	450	400	141	[illegible]	21
11	20	65	7020	5080	1530	846	375	413	445	135	[illegible]	20
12	20	61	4480	3620	1530	801	365	423	404	132	51	19
13	21	74	3050	2700	1570	716	387	444	378	125	51	20
14	21	90	2540	2080	1450	742	387	407	353	125	52	20
15	21	92	2210	5720	1400	711	368	380	332	124	55	21
16	24	80	1800	4340	1320	677	382	401	320	120	60	20
17	21	78	1630	4080	1230	659	350	430	315	120	61	20
18	24	96	1450	3330	1180	636	417	388	307	113	58	22
19	21	91	1300	2630	1080	612	507	368	287	109	56	23
20	26	88	1100	2270	1000	588	504	348	276	102	51	27
21	26	102	1300	2070	1050	600	538	320	265	98	52	29
22	27	108	1300	1900	1030	587	539	313	260	90	48	28
23	34	98	1230	1930	1060	580	520	303	232	85	47	28
24	37	83	1100	1900	1030	581	514	290	223	84	45	28
25	41	78	1010	2030	1020	557	477	288	208	81	41	29
26	44	73	866	2170	1010	536	457	282	202	84	44	24
27	45	70	808	2130	1070	520	441	270	195	84	41	24
28	45	67	870	2800	1110	510	421	261	180	81	38	12
29	45	61	824	2050	1170	488	405	330	180	76	28	12
30	46	101	771	3300		478	471	288	183	72	26	12
31	46		717	2800		457		286		70	25	
TOTAL	850	2186	81765	77088	39730	23610	13136	11692	10070	3760	1586	719
MEAN	27.4	72.9	2638	2487	1370	762	438	377	336	122	51.2	24.0
MAX	46	108	14100	5720	2600	1120	507	533	506	185	66	32
MIN	17	40	470	649	1010	457	350	270	180	70	25	19
AC-FT	1690	4340	162200	152900	78800	46830	26050	23190	19970	7470	3150	1430

CAL YR 1987 TOTAL 369110 MEAN 1011 MAX 14100 MIN 17 AC-FT 732200
WTR YR 1988 TOTAL 266206 MEAN 727 MAX 14100 MIN 17 AC-FT 528000

KLAMATH RIVER BASIN

11530000 TRINITY RIVER AT HOOPA, CA

LOCATION.--Lat 41°03'00", long 123°40'15", in SE 1/4 NW 1/4 sec.25, T.8 N., R.4 E., Humboldt County, Hydrologic Unit 18010211, in Hoopa Valley Indian Reservation, on left bank at Hoopa, 0.4 mi upstream from Supply Creek.

DRAINAGE AREA.--2,853 mi^2.

PERIOD OF RECORD.--October 1911 to January 1914, October 1916 to September 1918, October 1931 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Published as "near Hoopa" 1931-60.

REVISED RECORDS.--WSP 1565: 1913. WDR CA-77-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 274.82 ft above National Geodetic Vertical Datum of 1929. Prior to October 1931, nonrecording gage at site 0.4 mi upstream at different datum. October 1931 to Dec. 22, 1964, water-stage recorder at site 2.5 mi upstream at datum 31.67 ft higher.

REMARKS.--Estimated daily discharges: Oct. 20 to Nov. 10, Nov. 15, 16, 25, Dec. 13-15, 25-28, Feb. 2-5, and June 28-30. Records fair. Flow regulated since November 1960 by Clair Engle Lake (station 11525400) 84 mi upstream, and by transbasin diversion to Judge Francis Carr powerplant (station 11525430) since April 1963. Small diversions above station for irrigation.

AVERAGE DISCHARGE .--33 years (water years 1912-13, 1917-18, 1932-60), 5,619 ft^3/s, 4,071,000 acre-ft/yr; 25 years (water years 1964-88), 4,953 ft^3/s, 3,588,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 231,000 ft^3/s, Dec. 22, 1964, gage height, 57.0 ft, present site and datum, from floodmarks, from rating curve extended above 123,000 ft^3/s; minimum, 162 ft^3/s, Oct. 4, 1931.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 22,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 6	2245	25,800	24.31	Dec. 11	0200	*44,400	*28.79

Minimum daily, 436 ft^3/s, Oct. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	437	541	4830	2150	7780	4010	1940	2580	3370	1190	589	484
2	437	541	14800	2150	6720	3990	1970	2430	4600	1200	579	484
3	436	541	8400	2850	5950	3650	2050	2350	3360	1220	569	479
4	446	541	10600	3720	5300	3500	2130	2270	2990	1190	564	479
5	448	545	9640	4030	4970	3620	2060	2220	2860	1150	557	476
6	448	545	14300	3530	4660	3450	2010	2230	2870	1100	569	471
7	441	615	16500	3320	4440	3270	2010	2360	2950	1070	572	469
8	444	650	9840	3560	4290	3100	2010	2790	2970	1040	559	480
9	455	641	10800	5460	4320	3100	1920	2850	2880	1000	547	479
10	457	619	24000	9580	4780	3000	1870	2760	2900	990	540	479
11	459	650	35900	15700	5170	2830	1900	2700	2760	980	525	478
12	458	743	18300	12200	5120	2730	1970	2710	2610	947	526	474
13	458	765	10900	9690	5100	2610	2040	3060	2470	927	522	471
14	445	724	8470	9700	5030	2540	2090	3000	2370	907	531	469
15	452	708	6930	15300	4720	2470	2010	2670	2330	875	537	469
16	456	758	5930	15300	4510	2350	1940	2650	2320	867	551	470
17	458	803	5340	12600	4320	2350	1930	3060	2220	853	543	475
18	460	736	4850	10200	4100	2310	1900	2720	2160	832	533	479
19	465	757	4410	8690	3880	2320	2080	2490	2020	811	543	482
20	455	810	3850	7550	3630	2290	2900	2380	1930	776	535	493
21	455	819	3370	6760	3480	2300	3040	2340	1830	751	526	500
22	465	763	3280	6170	3440	2300	2740	2360	1760	714	516	500
23	475	729	3520	6040	3420	2320	2690	2300	1680	702	511	500
24	530	738	3580	6410	3400	2370	2590	2190	1610	690	511	497
25	530	719	3360	6870	3360	2260	2520	2080	1560	677	506	497
26	522	694	3120	7160	3330	2210	2410	2070	1430	667	506	493
27	522	678	2870	7550	3460	2220	2380	2000	1340	669	500	493
28	522	664	2670	7940	3660	2220	2430	1990	1240	653	500	495
29	522	672	2490	8610	3860	2120	2540	2190	1190	648	500	497
30	523	842	2400	10200	---	2050	2740	1970	1180	621	493	492
31	545	---	2300	9030	---	1990	---	1830	---	610	489	---
TOTAL	14626	20551	261550	240020	130200	83850	66810	75600	69760	27327	16549	14504
MEAN	472	685	8437	7743	4490	2705	2227	2439	2325	882	534	483
MAX	545	842	35900	15700	7780	4010	3040	3060	4600	1220	589	500
MIN	436	541	2300	2150	3330	1990	1870	1830	1180	610	489	469
AC-FT	29010	40760	518800	476100	258300	166300	132500	150000	138400	54200	32820	28770

CAL YR 1987 TOTAL 1266751 MEAN 3471 MAX 35900 MIN 433 AC-FT 2513000
WTR YR 1988 TOTAL 1021347 MEAN 2791 MAX 35900 MIN 436 AC-FT 2026000

11530500 KLAMATH RIVER NEAR KLAMATH, CA
(National stream-quality accounting network station)

LOCATION.--Lat 41°30'52", long 123°59'57", in SW 1/4, sec.13, T.13 N., R.2 E., Del Norte County, Hydrologic Unit 18010209, on right bank 0.2 mi upstream from Turwar Creek and 2.2 mi southeast of Klamath.

DRAINAGE AREA.--12,100 mi^2, approximately (not including Lost River or Lower Klamath Lake basins).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1910 to December 1926 (published as "near Requa"), October 1950 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.--WSP 1285: 1951(P). WSP 1445: 1918-20. WDR CA-81-2: 1980.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to June 1926, nonrecording gage at site 2.6 mi upstream at different datum. Oct. 1, 1950, to Oct. 2, 1975, water-stage recorder at site 2.6 mi upstream at datum 5.60 ft above NGVD.

REMARKS.--No estimated daily discharge. Records good except for those less than 8,000 ft^3/s, which are fair. Medium and low flows considerably regulated by reservoirs and powerplants above station. Large diversions for irrigation above station.

AVERAGE DISCHARGE.--54 years, 17,850 ft^3/s, 12,930,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 557,000 ft^3/s, Dec. 23, 1964, gage height, 55.3 ft, former datum, from floodmarks, from rating curve extended above 230,000 ft^3/s on basis of flood-routing study; minimum daily, 1,310 ft^3/s, Sept. 4, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 90,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 10	1900	*113,000	*22.34				

Minimum daily, 1,990 ft^3/s, Sept. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2640	2890	5580	8920	23600	15500	8060	10400	16800	5360	2730	2210
2	2630	2910	33600	8470	20900	14800	8090	9630	24900	5230	2690	2150
3	2640	2900	42200	9540	19000	14000	8730	9400	19200	5150	2650	2130
4	2650	2890	28300	11600	17600	13900	9340	9170	16300	5100	2660	2120
5	2660	2890	32500	12600	16400	14900	8850	8870	14700	4970	2670	2100
6	2660	2870	33100	11900	15700	14900	8430	8750	14300	4800	2730	2080
7	2670	2860	54600	11100	15000	14300	8440	9310	14900	4660	2830	2080
8	2660	2880	35200	12900	14600	13500	8540	10100	14700	4470	2870	2090
9	2670	2990	35200	19200	15300	13300	8170	10300	14900	4200	2850	2080
10	2680	3060	87300	40200	17100	13200	7920	9950	16100	4080	2800	2030
11	2690	3040	75500	57900	17500	12400	8000	9830	15200	3980	2780	1990
12	2700	2980	43700	47400	17400	11800	8310	10100	14100	3890	2730	1990
13	2700	3320	28900	35600	17600	11300	8670	12300	13000	3810	2740	2000
14	2700	3950	21800	36500	17000	10900	8990	11900	12100	3750	2730	2000
15	2690	3580	18600	60200	16000	10700	8830	10600	11200	3690	2770	2020
16	2700	3390	16700	57500	15500	10400	8630	10900	10700	3620	2810	2130
17	2700	3400	14900	47300	14800	10000	8380	12900	10300	3520	2740	2260
18	2710	3440	13500	37900	14400	9420	8230	11600	9670	3430	2680	2190
19	2710	3420	12600	30800	14000	9400	8310	10400	9250	3310	2630	2080
20	2720	3390	11500	26200	13700	9120	9800	9810	8840	3230	2610	2090
21	2730	3710	11200	23000	13400	8890	10800	9530	8450	3140	2570	2140
22	2740	3660	12300	20700	13300	8990	10800	9490	8040	3060	2530	2150
23	2780	3470	12200	19000	13400	9470	10300	9350	7670	2990	2510	2140
24	2820	3350	11400	19200	13600	10000	9740	8990	7290	2890	2490	2110
25	2840	3430	10600	19400	13600	9270	9330	8550	6980	2960	2470	2120
26	2840	3470	10200	19600	13400	9080	8940	8350	6770	2980	2460	2100
27	2830	3300	9770	20200	13900	9590	8740	8120	6480	3000	2440	2110
28	2820	3220	9560	21300	14700	9640	8810	7870	6090	2960	2370	2130
29	2830	3170	9470	23700	15100	9230	9530	8910	5830	2880	2360	2140
30	2840	3260	9380	29100	---	8620	11000	8290	5580	2840	2340	2140
31	2850	---	9420	27000	---	8240	---	7780	---	2780	2280	---
TOTAL	84500	97090	760780	825930	457500	348760	268710	301450	350340	116730	81520	63100
MEAN	2726	3236	24540	26640	15780	11250	8957	9724	11680	3765	2630	2103
MAX	2850	3950	87300	60200	23600	15500	11000	12900	24900	5360	2870	2260
MIN	2630	2860	5580	8470	13300	8240	7920	7780	5580	2780	2280	1990
AC-FT	167600	192600	1509000	1638000	907500	691800	533000	597900	694900	231500	161700	125200

CAL YR 1987 TOTAL 4411930 MEAN 12090 MAX 87300 MIN 2160 AC-FT 8751000
WTR YR 1988 TOTAL 3756410 MEAN 10260 MAX 87300 MIN 1990 AC-FT 7451000

11530500 KLAMATH RIVER NEAR KLAMATH, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.
CHEMICAL DATA: Water years 1951 to current year.
BIOLOGICAL DATA: Water years 1975-81.
SPECIFIC CONDUCTANCE: Water years 1975-81.
WATER TEMPERATURE: Water years 1966-81.
SEDIMENT DATA: Water years 1955-56, 1975 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1974 to September 1981.
WATER TEMPERATURE: November 1965 to September 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (FTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV 23...	1345	3630	201	8.40	10.5	1.3	770	11.7	104	K9	<1
JAN 27...	1450	20100	146	8.20	7.5	8.9	760	11.8	99	K5	37
MAR 09...	1420	13300	150	8.20	9.5	3.2	775	11.3	97	<1	K3
MAY 11...	1245	9840	158	8.20	15.0	1.5	765	10.2	101	K3	K3
JUL 19...	1345	3290	179	8.50	23.0	0.30	760	9.2	108	K3	K13
SEP 08...	1230	2100	198	8.70	21.5	1.0	760	8.9	101	K3	K18

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER WH IT FIELD MG/L AS HCO3	CAR-BONATE WATER WH IT FIELD MG/L AS CO3	ALKA-LINITY WAT WH TOT IT FIELD MG/L AS CACO3
NOV 23...	86	3	20	8.7	10	20	0.5	1.5	100	1	84
JAN 27...	65	0	15	6.7	4.3	12	0.2	0.80	82	--	68
MAR 09...	63	0	14	6.9	6.7	18	0.4	1.1	79	--	65
MAY 11...	67	0	15	7.2	5.6	15	0.3	0.90	80	--	66
JUL 19...	79	0	18	8.2	4.4	11	0.2	1.3	93	1	78
SEP 08...	83	0	18	9.3	11	22	0.5	1.6	102	3	88

DATE	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
NOV 23...	83	12	5.7	<0.10	23	142	132	0.19	<0.010	0.230	0.010
JAN 27...	66	8.0	2.8	0.10	17	93	95	0.13	<0.010	0.110	0.010
MAR 09...	64	10	2.7	0.10	18	94	99	0.13	<0.010	0.140	<0.010
MAY 11...	67	9.2	2.8	0.10	15	95	96	0.13	<0.010	<0.100	0.020
JUL 19...	80	11	3.7	0.10	12	96	107	0.13	<0.010	<0.100	0.050
SEP 08...	87	13	4.8	0.10	19	124	129	0.17	0.010	<0.100	<0.010

See footnotes at end of table.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)
NOV											
23...	0.010	0.30	0.070	0.060	0.050	<10	2	16	<0.5	<1	1
JAN											
27...	<0.010	0.30	0.030	0.020	0.010	50	1	12	<0.5	<1	<1
MAR											
09...	0.010	0.50	0.050	0.040	<0.010	--	--	--	--	--	--
MAY											
11...	0.020	<0.20	0.020	0.020	0.010	20	1	20	<0.5	2	<1
JUL											
19...	<0.010	<0.20	0.020	0.020	0.020	--	--	--	--	--	--
SEP											
08...	<0.010	0.30	0.070	0.070	0.040	<10	3	24	<0.5	<1	<1

DATE	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)
NOV											
23...	<3	2	19	<5	10	5	<0.1	<10	3	<1	<1.0
JAN											
27...	<3	1	30	<5	<4	3	<0.1	<10	4	<1	1.0
MAR											
09...	--	--	--	--	--	--	--	--	--	--	--
MAY											
11...	<3	1	14	<5	5	3	<0.1	<10	3	<1	1.0
JUL											
19...	--	--	--	--	--	--	--	--	--	--	--
SEP											
08...	<3	1	11	<5	6	2	<0.1	<10	1	<1	<1.0

DATE	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DISSOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DISSOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DISSOLVED (UG/L AS U)
NOV											
23...	120	<6	<3	--	--	--	--	--	--	--	--
JAN											
27...	83	<6	<3	--	--	--	--	--	--	--	--
MAR											
09...	--	--	--	<0.4	<0.4	1.4	<0.4	1.1	<0.4	0.02	0.07
MAY											
11...	90	<6	14	--	--	--	--	--	--	--	--
JUL											
19...	--	--	--	--	--	--	--	--	--	--	--
SEP											
08...	120	<6	5	0.8	<0.4	1.7	<0.4	1.4	<0.4	--	0.09

K Results based on colony count outside the acceptable range (non-ideal colony count).
< Actual value is known to be less than the value shown.

11530500 KLAMATH RIVER NEAR KLAMATH, CA--Continued

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	SEDI- MENT, SUS- PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR										
09...*	1320	137	154	8.20	9.5	775	11.3	97	14	73
09...*	1355	278	153	8.20	9.5	775	11.6	100	16	62
09...*	1425	367	150	8.20	9.5	775	11.3	97	11	72
09...*	1500	468	151	8.30	9.5	775	10.9	94	9	82
09...*	1530	572	150	8.40	9.5	775	10.9	94	12	83
SEP										
08...*	1305	175	203	8.70	21.0	760	9.2	104	14	40
08...*	1320	265	201	8.70	21.0	760	9.1	102	13	45
08...*	1330	348	198	8.70	21.0	760	8.9	100	16	45
08...*	1340	444	199	8.70	21.0	760	8.8	99	13	48
08...*	1350	505	197	8.80	21.0	760	8.5	96	14	44

*Instantaneous streamflow at the time of cross-sectional measurements: Mar. 9, 13,300 ft^3/s; Sept. 8, 2,100 ft^3/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV						
23...	1345	3630	10.5	3	29	--
JAN						
27...	1450	20100	7.5	47	2550	53
MAR						
09...	1420	13300	9.5	13	470	72
MAY						
11...	1245	9840	15.0	8	213	67
JUL						
19...	1345	3290	23.0	4	36	--
SEP						
08...	1230	2100	21.5	14	80	47

11532500 SMITH RIVER NEAR CRESCENT CITY, CA
(National stream-quality accounting network station)

LOCATION.--Lat 41°47'22", long 124°03'14", in SW 1/4 SW 1/4 sec.10, T.16 N., R.1 E., Del Norte County, Hydrologic Unit 18010101, Six Rivers National Forest, on left bank 0.5 mi downstream from South Fork and 8.1 mi east of Crescent City.

DRAINAGE AREA.--609 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1931 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 89.61 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--57 years, 3,839 ft^3/s, 2,781,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 228,000 ft^3/s, Dec. 22, 1964, gage height, 48.5 ft, from floodmarks, from rating curve extended above 110,000 ft^3/s on basis of slope-area measurement at gage height 39.51 ft; minimum daily, 160 ft^3/s, Oct. 24, 25, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 36,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 10	0530	*76,900	*30.01	Jan. 15	0100	37,500	23.47
Jan. 10	1915	41,900	24.31				

Minimum daily, 184 ft^3/s, Oct. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	187	249	5600	2620	3680	1650	1190	3730	12500	1010	439	298
2	185	310	19400	2340	3250	1390	1150	3130	7970	981	431	291
3	185	253	14000	3190	2960	1350	1590	2900	7920	958	424	291
4	187	222	9900	4460	2730	1470	1820	2650	5580	946	424	283
5	185	213	8040	4120	2550	2000	1750	2400	4460	920	416	280
6	184	209	22600	3400	2380	2020	1600	2290	4070	880	424	277
7	184	207	16400	3310	2250	2120	1540	2800	4030	843	421	277
8	185	206	12000	7120	2240	1880	1450	2880	3600	813	413	271
9	187	358	24100	18000	2960	2200	1360	2620	4060	790	398	270
10	187	339	51300	35700	2900	2170	1280	2430	4640	761	389	269
11	187	251	15700	22300	2670	1990	1210	2350	3910	742	388	263
12	187	265	8410	12100	2510	1790	1170	2350	3310	730	384	260
13	187	1300	5860	9540	2360	1620	1130	3380	2930	717	393	259
14	189	917	4560	19500	2200	1500	1120	2960	2650	715	399	257
15	189	478	4490	25200	2080	1410	1080	2600	2400	690	402	257
16	189	449	4810	14000	1960	1340	1030	3090	2210	667	397	259
17	189	518	4210	9930	1840	1260	1010	3370	2050	642	381	261
18	189	562	3480	7370	1740	1210	972	2920	1890	610	373	260
19	189	424	2970	5820	1640	1170	1070	2570	1770	594	360	277
20	189	424	2640	4900	1590	1130	1290	2290	1650	574	347	322
21	189	715	2810	4340	1540	1130	2020	2060	1540	556	337	298
22	189	602	3690	3950	1500	1110	2560	1880	1450	541	337	278
23	189	607	3240	3720	1460	2100	2260	1730	1380	521	337	270
24	192	665	2790	3520	1430	2170	1970	1600	1320	508	332	270
25	193	989	2500	3330	1390	1810	1740	1490	1260	501	330	265
26	193	691	2280	3210	1370	1650	1570	1410	1220	491	326	265
27	193	536	2120	3190	1370	1620	1430	1370	1170	484	318	273
28	191	449	2180	3170	1380	1470	1380	1830	1130	473	311	277
29	191	396	2360	4500	1360	1380	2540	2010	1090	465	306	270
30	193	584	2820	5580	---	1310	4140	1770	1040	457	305	259
31	201	---	3090	4360	---	1240	---	1760	---	450	298	---
TOTAL	5854	14388	270350	257790	61290	49660	47422	74620	96200	21030	11540	8207
MEAN	189	480	8721	8316	2113	1602	1581	2407	3207	678	372	274
MAX	201	1300	51300	35700	3680	2200	4140	3730	12500	1010	439	322
MIN	184	206	2120	2340	1360	1110	972	1370	1040	450	298	257
AC-FT	11610	28540	536200	511300	121600	98500	94060	148000	190800	41710	22890	16280

CAL YR 1987 TOTAL 1083733 MEAN 2969 MAX 51300 MIN 184 AC-FT 2150000
WTR YR 1988 TOTAL 918351 MEAN 2509 MAX 51300 MIN 184 AC-FT 1822000

11532500 SMITH RIVER NEAR CRESCENT CITY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952 to current year.
CHEMICAL DATA: Water years 1952 to current year.
BIOLOGICAL DATA: Water years 1978-81.
SPECIFIC CONDUCTANCE: Water years 1979-81.
WATER TEMPERATURE: Water years 1966-81.
SEDIMENT DATA: Water years 1955-56, November 1977 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1978 to September 1981.
WATER TEMPERATURE: October 1965 to September 1981.
SUSPENDED-SEDIMENT DISCHARGE: November 1977 to September 1979, October 1980 to September 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (FTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
DEC												
17...	1130	4250	94	8.00	7.0	0.80	755	12.7	106	K18	36	47
MAR												
16...	1150	1330	109	8.10	8.5	4.6	765	12.4	106	K3	K3	53
JUN												
23...	1115	1390	118	8.20	16.0	0.20	760	10.3	105	K5	K2	58
SEP												
13...	0930	260	155	8.40	16.5	0.50	760	9.3	95	K2	K5	81

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER WH IT FIELD MG/L AS HCO3	ALKA-LINITY WAT WH TOT IT FIELD MG/L AS CACO3	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
DEC												
17...	2	4.4	8.7	2.0	8	0.1	0.40	53	44	45	3.1	3.9
MAR												
16...	1	5.2	9.8	1.7	6	0.1	0.20	64	52	52	2.7	2.1
JUN												
23...	1	6.9	9.9	2.1	7	0.1	0.30	68	56	57	2.8	2.0
SEP												
13...	7	9.2	14	2.8	7	0.1	0.30	90	74	74	4.1	2.7

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)
DEC											
17...	0.10	14	67	64	0.09	<0.010	<0.100	<0.010	0.010	0.20	<0.010
MAR											
16...	0.10	14	58	67	0.08	<0.010	<0.100	<0.010	0.020	<0.20	0.010
JUN											
23...	0.10	14	58	73	0.08	<0.010	0.170	0.010	0.020	<0.20	<0.010
SEP											
13...	<0.10	13	80	91	0.11	<0.010	<0.100	<0.010	<0.010	<0.20	0.020

See footnotes at end of table.

11532500 SMITH RIVER NEAR CRESCENT CITY, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)
DEC											
17...	<0.010	<0.010	10	<1	4	<0.5	<1	3	<3	1	30
MAR											
16...	<0.010	<0.010	<10	<1	5	<0.5	<1	3	<3	1	4
JUN											
23...	<0.010	0.020	<10	<1	19	<0.5	<1	2	<3	<1	5
SEP											
13...	0.020	<0.010	<10	<1	12	<0.5	<1	2	<3	3	<3

DATE	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
DEC											
17...	<5	<4	2	<0.1	<10	8	<1	<1.0	25	<6	7
MAR											
16...	<5	<4	<1	<0.1	<10	7	<1	<1.0	27	<6	<3
JUN											
23...	<5	<4	2	<0.1	<10	8	<1	<1.0	36	<6	9
SEP											
13...	<5	<4	<1	<0.1	<10	4	<1	<1.0	47	<6	14

K Results based on colony count outside the acceptable range (non-ideal colony count).
< Actual value is known to be less than the value shown.

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	SEDIMENT, SUSPENDED (MG/L)
MAR									
16...*	1035	211	105	8.10	8.0	765	12.6	106	1
16...*	1120	171	114	8.10	8.0	765	12.4	104	1
16...*	1155	146	111	8.10	8.0	765	12.4	104	0
16...*	1235	124	112	8.10	8.5	765	12.5	106	0
16...*	1315	85.0	106	8.10	8.5	765	12.3	105	0
SEP									
13...*	1230	51.0	157	8.40	18.0	760	8.2	87	6
13...*	1250	75.0	154	8.40	17.5	760	9.3	98	6
13...*	1310	94.0	154	8.30	17.5	760	9.2	96	6
13...*	1325	112	153	8.30	17.5	760	9.5	100	7
13...*	1345	131	153	8.30	17.5	760	9.3	98	4

*Instantaneous streamflow at the time of cross-sectional measurement: Mar. 16, 1,330 ft^3/s; Sept. 13, 260 ft^3/s.

11532500 SMITH RIVER NEAR CRESCENT CITY, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC						
17...	1130	4250	7.0	3	34	--
MAR						
16...	1315	1330	8.5	0	0.0	--
JUN						
23...	1115	1390	16.0	6	23	--
SEP						
13...	1230	260	17.5	6	4.2	63

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the U.S. Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low- or flood-flow analyses, depending on the type of data collected.

Low-Flow Partial-Record Stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. The column headed "Period of record" shows the water years in which measurements were made at the same or practically the same site.

Discharge measurements made at low-flow partial-record stations during water year 1988

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements Date	Measurements Discharge (ft^3/s)
		Klamath River basin				
11525520	Deadwood Creek at Lewiston	Lat 40°43'02", long 122°48'04", in SW 1/4 NW 1/4 sec.17, T.33 N., R.8 W.,Trinity County, 300 ft upstream from mouth and 0.7 mi northeast of Lewiston.	9.10	b1965-75 1976-88	04-05-88 05-04-88 07-07-88 09-06-88	a1.36 a2.91 a0.46 a0.12

a Base flow

b Published as a miscellaneous measurement

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements are made at sites not included in the partial-record program. These measurements are generally made in time of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Measurements of streamflow in the area covered by this report made at miscellaneous sites are given in the following table. The column headed "Period of Record" shows the water years in which measurements were made at the same or practically the same site.

Discharge measurements made at special study and miscellaneous sites during water year 1988

Stream	Tributary to	Location	Drainage area (mi^2)	Measured Previously (water year)	Measurements	
					Date	Discharge (ft^3/s)
		Santa Rosa Creek Basin				
11142200 Santa Rosa Creek near Cambria		Lat 35°34'35", long 120°59'50", in NE 1/4 NE 1/4 sec.21, T.27 S., R.9 E., San Luis Obispo County, Hydrologic Unit 18060006, on left bank and 4.8 mi east of Cambria.	12.5	--	3-09-88	2.95
					4-22-88	1.67
					5-11-88	0.83
					6-22-88	a0.23
		Salinas River Basin				
11151870 Arroyo Seco near Greenfield	Salinas River	Lat 36°14'15", long 121°28'50", in NE 1/4 SE 1/4 sec.36, T.19 S., R.4 E., Monterey County, Hydrologic Unit 18060005, on right bank 0.6 mi downstream from Rocky Creek and 14.5 mi southwest of Greenfield.	113	1962-87	10-01-87	a2.29
					11-02-87	a7.56
					12-17-87	155
					1-08-88	116
					2-03-88	a57.0
					3-09-88	38.6
					4-01-88	a19.6
					5-02-88	26.8
		Frenchmans Creek Basin				
11162635 Frenchmans Creek near Half Moon Bay		Lat 37°29'00", long 122°26'42", in Corral de Tierra (Vasquez) Grant, San Mateo County, Hydrologic Unit 18050006, at bridge on State Highway 1, 0.4 mi upstream from mouth, and 1.7 mi northwest of town of Half Moon Bay.	4.17	1977	11-05-87	a0.26
					12-08-87	3.25
					1-06-88	2.77
					2-19-88	a1.21
					3-25-88	a0.22
					4-12-88	0
					5-10-88	a0.24
					7-08-88	a0.18
					7-19-88	0
					8-15-88	0
					9-19-88	0
		Alameda Creek Basin				
11177200 Vallecitos Creek	Arroyo de la Laguna	Lat 37°35'42", long 121°52'51", in Valle de San Jose Grant, Alameda County, Hydrologic Unit 18050004, on right bank at culvert on Sunol Road, 700 ft upstream from mouth and 0.3 mi east of Sunol.	7.48	1975-76 1977-88	11-24-87	25.2
					1-13-88	30.0
					3-04-88	28.7
					4-13-88	0.88
					6-09-88	30.5
					8-10-88	0.91
		Corte Madera Creek Basin				
11460015 Corte Madera Creek at College Avenue, at Kentfield	San Francisco Bay	Lat 37°57'16", long 122°32'51" in Punta de Quentin Grant, Marin County, Hydrologic Unit 18050002, on downstream side of College Avenue bridge, 0.7 mi southeast of town of Ross, and 3.1 mi upstream of mouth.	18.2	--	12-04-87	77
					1-04-88	695
		Purisima Creek Basin				
Purisima Creek		Lat 34°24'09", long 122°24'41", in Canada de Verde Y Arroyo de la Purisima Grant, San Mateo County, Hydrologic Unit 18050006, at bridge on Verde Road, 0.5 mi northwest of Lobitos and 4 mi south of Half Moon Bay.	8.35	--	10-06-87	a0.25
					11-05-87	a0.59
					12-08-87	9.04
					1-05-88	6.34
					2-19-88	a1.27
					3-25-88	a1.03
					4-12-88	a0.62
					5-10-88	a0.75
					6-08-88	a0.56
					7-19-88	a0.44
					8-15-88	a0.50
					9-19-88	a0.04

See footnote at end of table.

Discharge measurements made at special study and miscellaneous sites during water year 1988--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured Previously (water year)	Measurements Date	Measurements Discharge (ft^3/s)
		Santa Rosa Creek Basin				
Santa Rosa Creek		Lat 35°33'39", long 121°05'39", San Luis Obispo County, Hydrologic Unit 18060006, at Highway 1 bridge, 1.3 mi upstream from mouth, and 0.8 mi west of Cambria.	46.6	--	3-09-88	5.01
					4-21-88	3.91
					5-10-88	1.73
					6-22-88	0
Tributary 1	Santa Rosa Creek	Lat 35°33'55", long 121°04'26", San Luis Obispo County, Hydrologic Unit 18060006, at convergence with Santa Rosa Creek, 300 feet downstream from Main Street bridge in Cambria.	0.38	--	3-10-88	0
					4-21-88	0
Santa Rosa Creek		Lat 35°33'58", long 121°04'26", San Luis Obispo County, Hydrologic Unit 18060006, at Main Street bridge in Cambria.	44.7	--	3-10-88	3.99
					4-21-88	2.63
					5-10-88	3.92
					6-22-88	[a]0.31
Santa Rosa Creek		Lat 35°34'06", long 121°06'11", San Luis Obispo County, Hydrologic Unit 18060006, at bridge at intersection of Windsor Boulevard and County Road, 0.5 mi upstream from mouth, and 1.3 mi west of Cambria.	47.1	--	3-08-88	4.99
					5-10-88	1.68
					6-22-88	[a]0.11
Tributary 4	Santa Rosa Creek	Lat 35°34'13", long 121°03'47", in SE 1/4 SW 1/4 sec.24, T.27 S., R.8 E., San Luis Obispo County, Hydrologic Unit 18060006, at northern side of Santa Rosa Creek Road and 1 mi northeast of Cambria.	0.83	--	3-10-88	0
					4-22-88	0
Tributary 5	Santa Rosa Creek	Lat 35°34'19", long 121°03'16", in NE 1/4 SE 1/4 sec.24, T.27 S., R.8 E., San Luis Obispo County, Hydrologic Unit 18060006, on southern side of Santa Rosa Creek Road and 1.7 mi northeast of Cambria.	1.23	--	3-10-88	0
					4-23-88	0
					5-10-88	0
					6-22-88	0
Tributary 6	Santa Rosa Creek	Lat 35°34'37", long 121°01'31", in SE 1/4 NW 1/4 sec.20, T.27 S., R.9 E., San Luis Obispo County, Hydrologic Unit 18060006, at northern edge of Santa Rosa Creek Road and 3.2 mi northeast of Cambria.	0.42	--	3-10-88	0
					4-22-88	0
Tributary 7	Santa Rosa Creek	Lat 35°34'50", long 121°00'07", in SW 1/4 SE 1/4 sec.16, T.27 S., R.9 E., San Luis Obispo County, Hydrologic Unit 18060006, on eastern side of Santa Rosa Creek Road, 100 ft north of intersection and 4.6 mi northeast of Cambria.	2.09	--	3-10-88	0
					4-22-88	0
					5-10-88	0
					6-22-88	0

See footnote at end of table.

Discharge measurements made at special study and miscellaneous sites during water year 1988--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured Previously (water year)	Measurements	
					Date	Discharge (ft^3/s)
		San Simeon Creek Basin				
Van Gordon Creek	San Simeon Creek	Lat 35°35'58", long 121°07'04", San Luis Obispo County, Hydrologic Unit 18060006, at downstream end of culvert under San Simeon Creek Road, 3.2 mi northwest of Cambria.	2.49	--	3-08-88	0.24
					4-20-88	0.38
San Simeon Creek		Lat 35°36'01", long 121°06'19", San Luis Obispo County, Hydrologic Unit 18060006, approximately 200 ft south of San Simeon Creek Road at end of dirt road and 3 mi northwest of Cambria.	25.4	--	3-08-88	4.41
					4-20-88	10.7
					5-10-88	0.76
					6-22-88	0
Tributary 2	San Simeon Creek	Lat 35°36'04", long 121°06'22", San Luis Obispo County, Hydrologic Unit 18060006, at north shoulder of San Simeon Creek Road and 2.9 mi northwest of Cambria.	0.57	--	3-08-88	0
					4-20-88	0
Tributary 4	San Simeon Creek	Lat 35°36'28", long 121°04'53", in SE 1/4 NW 1/4 sec.11, T.27 S., R.8 E., San Luis Obispo County, Hydrologic Unit 18060006, on southwest edge of San Simeon Creek Road and 3 mi north of Cambria.	0.37	--	3-08-88	0
					4-20-88	0
San Simeon Creek		Lat 35°36'35", long 121°04'31", in NE 1/4 SW 1/4 sec.11, T.27 S., R.8 E., San Luis Obispo County, Hydrologic Unit 18060006, at bridge on San Simeon Creek Road, at Palmer Flats and 3.1 mi north of Cambria.	23.1	--	3-08-88	5.08
					4-20-88	19.4
					5-10-88	0.98
					6-22-88	0
		Pescadero Creek Basin				
Butano Creek	Pescadero Creek	Lat 37°15'00", long 122°23'04", in Butano Grant, San Mateo County, Hydrologic Unit 18050006, at bridge on Pescadero Road near intersection of Bean Hollow Road and Pescadero Road, 1.2 mi east of State Highway 1 and 0.7 mi southwest of Pescadero.	20.3	--	10-06-87	0
					11-05-87	5.79
					12-07-87	24.2
					1-05-88	14.0
					2-17-88	a5.08
					3-25-88	a2.03
					4-12-88	a0.31
					5-11-88	1.75
					6-09-88	a0.46
					7-20-88	0
					8-16-88	0
					9-19-88	0
		Pilarcitos Creek Basin				
Arroyo Leon	Pilarcitos Creek	Lat 37°27'44", long 122°25'32", in Miramontes Grant, San Mateo County, Hydrologic Unit 18050006, at bridge at entrance to Cemetery, at east end of Half Moon Bay city limits and 0.2 mi upstream from mouth.	8.52	--	10-06-87	0
					11-05-87	0
					12-08-87	4.53
					1-06-88	2.26
					2-13-88	a0.56
					3-25-88	0
					4-12-88	0
					5-10-88	0
					6-08-88	0
					7-19-88	0
					8-15-88	0
					9-19-88	0

a No measurable precipitation had fallen for 10 days prior to discharge measurement.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL RECORD STATIONS

SANTA ROSA CREEK BASIN

11142200 SANTA ROSA CREEK NEAR CAMBRIA, CA

LOCATION.--Lat 35°34'35", long 120°59'50", in NE 1/4 NE 1/4 sec.21, T.27 S., R.9 E., San Luis Obispo County, Hydrologic Unit 18060006, on left bank and 4.8 mi east of Cambria.

DRAINAGE AREA.--12.5 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: March to September 1988.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
MAR								
09...	1330	3.0	722	8.20	15.5	66	48	20
APR								
22...	1250	1.7	725	--	15.0	--	--	--
MAY								
11...	1250	0.83	757	--	19.0	--	--	--
JUN								
22...	1730	0.23	771	--	20.5	--	--	--

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	BORON, DISSOLVED (UG/L AS B)	IRON, DISSOLVED (UG/L AS FE)
MAR								
09...	1.4	306	95	14	0.30	20	130	9
APR								
22...	--	--	--	--	--	--	--	--
MAY								
11...	--	--	--	--	--	--	--	--
JUN								
22...	--	--	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

PAJARO RIVER BASIN

11153530 LLAGAS CREEK AT MACHADO SCHOOL, NEAR MORGAN HILL, CA

LOCATION.--Lat 37°05'23", long 121°39'38", in San Francisco de Las Llagas Grant, Santa Clara County, Hydrologic Unit 18060002, on left bank at Machado School, 125 ft upstream from Sycamore Avenue bridge, 1,300 ft downstream from small right-bank tributary, and 2.8 mi south of Morgan Hill.
DRAINAGE AREA.--24.1 mi^2.
PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1980 to current year.
SEDIMENT DATA: Water years 1985-87.
REMARKS.--Streamflow data provided by Santa Clara Valley Water District; not reviewed by U.S. Geological Survey.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS TOTAL (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3
NOV											
18...	1015	2.5	503	8.20	14.0	1.1	755	9.50	93	260	13
JUN											
16...	1400	E0.2	518	7.80	21.0	1.0	--	--	--	250	27

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
NOV											
18...	47	35	13	10	0.4	1.7	249	24	22	0.1	18
JUN											
16...	41	37	14	11	0.4	0.7	228	28	17	0.2	28

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)
NOV									
18...	312	0.42	<0.01	<0.01	0.30	0.24	0.02	<0.01	0.5
JUN									
16...	303	0.41	<0.01	--	0.40	--	<0.02	0.02	0.4

DATE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	BORON, DISSOLVED (UG/L AS B)	IRON, DISSOLVED (UG/L AS FE)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
NOV										
18...	<0.2	0.8	0.02	0.01	<0.01	210	8	7.2	4.5	--
JUN										
16...	0.4	0.8	0.02	0.01	<0.01	190	<3	--	2.1	0.4

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)
NOV										
18...	1015	<10	1	73	<1	<1	<1	1	<5	<4

See footnotes at end of table.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

PAJARO RIVER BASIN

11153530 LLAGAS CREEK AT MACHADO SCHOOL, NEAR MORGAN HILL, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
NOV									
18...	7	<0.1	1	3	<1	<1.0	260	4	4

E Estimated value.
< Actual value is known to be less than the value shown.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

GUADALUPE RIVER BASIN

11167572 GUADALUPE RIVER AT ALAMITOS RECHARGE FACILITY, AT SAN JOSE, CA

LOCATION.--Lat 37°14'51", long 121°52'08", in San Juan Bautista Grant, Santa Clara County, Hydrologic Unit 18050003, at south city limits of San Jose, 0.2 mi downstream from confluence at Alamitos and Guadalupe Creeks.
DRAINAGE AREA.--53.0 mi^2.
PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1979 to current year.
SEDIMENT DATA: Water years 1985-87.
REMARKS.--Streamflow data provided by Santa Clara Valley Water District; not reviewed by U.S. Geological Survey.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)
NOV 17...	1245	16	569	7.90	16.0	0.8	755	7.90	81	<10	190
JUN 16...	1100	15	600	9.10	20.0	2.0	--	--	--	10	180
JUL 13...	1130	6.6	684	8.80	24.0	1.6	755	7.10	85	17	200

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 17...	39	32	26	48	35	2	2.6	148	43	51	0.1
JUN 16...	50	29	26	63	43	2	2.9	130	51	100	0.1
JUL 13...	63	34	27	67	42	2	2.8	133	52	100	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)
NOV 17...	14	309	0.42	0.03	0.02	0.60	0.53	0.10	0.10	0.7
JUN 16...	4.5	355	0.48	<0.01	--	<0.10	--	0.02	0.04	0.3
JUL 13...	12	375	0.51	0.02	--	<0.10	--	0.06	0.06	0.6

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)
NOV 17...	0.9	1.3	0.02	0.02	<0.01	160	4	4.1	3.7	--
JUN 16...	0.3	--	0.04	0.01	<0.01	180	<3	--	4.0	1.3
JUL 13...	0.5	--	0.05	0.03	0.02	170	<3	--	4.4	2.0

See footnote at end of table.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

GUADALUPE RIVER BASIN

11167572 GUADALUPE RIVER AT ALAMITOS RECHARGE FACILITY, AT SAN JOSE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)
NOV										
17...	1245	<10	2	74	<1	2	1	1	<5	9

DATE	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
NOV									
17...	25	<0.1	1	3	<1	<1.0	250	<1	5

< Actual value is known to be less than the value shown.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

COYOTE CREEK BASIN

11169970 COYOTE CREEK BELOW LEROY ANDERSON DAM, NEAR MADRONE, CA

LOCATION.--Lat 37°09'54", long 121°37'56", in southeast corner of La Laguna Seca Grant, Santa Clara County, Hydrologic Unit 18050003, on left bank 500 ft downstream from release at Leroy Anderson Dam, 2.3 mi northeast of Madrone.
DRAINAGE AREA.--195 mi^2.
PERIOD OF RECORD.--
CHEMICAL DATA:: Water years 1980 to current year.
SEDIMENT DATA: Water year 1985.
REMARKS.--Streamflow data provided by Santa Clara Valley Water District; not reviewed by U.S. Geological Survey.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS TOTAL (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3
NOV											
18...	0900	64	471	8.10	14.5	4.8	755	9.80	97	210	31

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
NOV										
18...	51	20	24	20	0.7	2.3	180	49	17	0.2

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
NOV									
18...	5.3	279	0.38	0.02	0.01	0.20	0.18	0.14	0.13

DATE	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	BORON, DISSOLVED (UG/L AS B)	IRON, DISSOLVED (UG/L AS FE)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)
NOV										
18...	0.6	0.3	0.8	0.01	<0.01	<0.01	150	<10	5.1	4.3

DATE	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)
NOV									
18...	<10	2	300	<1	<1	<1	1	<5	10

DATE	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
NOV									
18...	<10	<0.1	2	<1	<1	<1.0	610	1	<10

< Actual value is known to be less than the value shown.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

COYOTE CREEK BASIN

11171500 COYOTE CREEK NEAR EDENVALE, CA

LOCATION.--Lat 38°16'15", long 121°47'47", at east boundary of Santa Teresa Grant, Santa Clara County, Hydrologic Unit 18050003, at "The Narrows," 1.5 mi northeast of Edenvale, and 7 mi south of San Jose.
DRAINAGE AREA.--229 mi^2.
PERIOD OF RECORD.--
DAILY STREAMFLOW DATA: Water years 1916-62. Published as Coyote River near Edenvale 1916-26.
CHEMICAL DATA: Water year 1979 to current year.
SEDIMENT DATA: Water years 1985-87.
REMARKS.--Streamflow data provided by Santa Clara Valley Water District; not reviewed by U.S. Geological Survey.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
NOV											
18...	0745	0.70	447	8.00	13.5	0.8	755	5.60	54	190	24

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV										
18...	41	21	25	22	0.8	2.2	166	48	20	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)
NOV									
18...	9.2	271	0.37	<0.01	<0.01	1.00	0.99	0.03	0.02

DATE	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)
NOV										
18...	0.8	<0.2	1.8	0.03	0.01	0.02	130	20	6.2	5.0

DATE	TIME	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)
NOV										
18...	0745	<10	<1	200	1	<1	<1	1	<5	10

DATE	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV									
18...	10	<0.1	3	4	<1	<1.0	450	2	<10

< Actual value is known to be less than the value shown.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

CORTE MADERA CREEK BASIN

11460015 CORTE MADERA CREEK AT COLLEGE AVENUE, AT KENTFIELD, CA

LOCATION.--Lat 37°57'16", long 122°32'51", in Punta de Quentin Grant, Marin County, Hydrologic Unit 18050002, on downstream side of College Avenue bridge. 0.7 mi southeast of Ross and 3.1 mi upstream of mouth.

DRAINAGE AREA.--18.2 mi^2.

PERIOD OF RECORD.--
SEDIMENT DATA: October 1987 TO September 1988.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM
DEC								
04...	1400	118	14.0	312	99	98	--	--
JAN								
04...	1120	728	9.5	472	928	84	94	100

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	TEMPER-ATURE WATER (DEG C)	NUMBER OF SAM-PLING POINTS (COUNT)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	STREAM WIDTH (FT)	SEDI-MENT DIS-CHARGE, BEDLOAD (TONS/ DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM
DEC							
04...	1430	14.0	16	118	33.0	0.06	4
JAN							
04...	1045	9.5	16	728	33.0	1.0	4

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM
DEC							
04...	9	41	73	82	91	100	--
JAN							
04...	28	52	78	97	98	98	100

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

GERBODE VALLEY CREEK BASIN

11460110 GERBODE VALLEY CREEK NEAR SAUSALITO, CA

LOCATION.--Lat 37°49'59",long 122°31'18", in Saucelito Grant, Marin County, Hydrologic Unit 18050005, at upstream side of footbridge, 400 ft upstream from mouth, and 1.8 mi southwest of Sausalito.

DRAINAGE AREA.--3.29 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1986 to June 1988 (discontinued).
SEDIMENT DATA: Water years 1986 to March 1988 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	SELENIUM, TOTAL (UG/L AS SE)
JAN 1986		
29...	1115	<1
JUN		
24...	1240	<1

< Actual value is known to be less than the value show.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	SELENIUM, TOTAL (UG/L AS SE)
MAR 1987		
05...	1245	<1
JUN		
16...	1145	<11

< Actual value is known to be less than value shown.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
MAR										
22...	1200	0.48	207	7.90	11.5	770	9.6	87	K40	K38
JUN										
08...	1310	0.19	207	7.90	12.5	770	9.3	86	48	470

DATE	HARDNESS TOTAL (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3
MAR										
22...	58	0	10	8.1	20	42	1	0.50	76	63
JUN										
08...	66	0	12	8.7	17	36	0.9	0.60	83	68

See footnotes at end of table.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

GERBODE VALLEY CREEK BASIN

11460110 GERBODE VALLEY CREEK NEAR SAUSALITO, CA--Continued

DATE	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)
MAR										
22...	63	12	24	0.10	17	129	130	0.18	<0.100	<0.010
JUN										
08...	68	7.7	20	0.30	16	123	123	0.17	<0.100	<0.010

DATE	ARSENIC TOTAL (UG/L AS AS)	BORON, DISSOLVED (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
MAR										
22...	<1	20	<10	1	20	99	<100	0.20	<1	10
JUN										
08...	<1	30	<10	2	<10	390	<100	<0.10	<1	<10

K Results based on colony count outside the acceptable range (non-ideal colony count).
< Actual value is known to be less than value shown.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
MAR					
22...	1230	0.48	11.5	10	0.01

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

GERBODE VALLEY CREEK BASIN

11460120 RODEO LAGOON AT FORT CRONKHITE, NEAR SAUSALITO, CA

LOCATION.--Lat 37°49'52", long 122°32'07" in Saucelito Grant, Marin County, Hydrologic Unit 18050005, at footbridge 600 ft upstream from mouth, 2.3 mi southwest of Sausalito.

DRAINAGE AREA.--4.07 mi².

PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1986 to June 1988 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	SELENIUM, TOTAL (UG/L AS SE)
JAN 1986		
29...	1410	<1
JUN		
24...	0950	<1

< Actual value is known to be less than the value shown.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	SELENIUM, TOTAL (UG/L AS SE)
MAR 1987		
05...	0945	<1
JUN		
16...	0925	<1

< Actual value is known to be less than the value shown.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)
MAR										
22...	0900	9940	8.00	14.5	770	8.6	86	K14	K8	1100
JUN										
08...	0945	9370	9.30	17.5	770	8.0	85	K2	K3	1100

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	CARBONATE WATER WH IT FIELD MG/L AS CO3	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3
MAR										
22...	970	75	210	1800	77	24	68	103	--	84
JUN										
08...	960	80	210	1800	77	24	66	77	27	108

DATE	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)
MAR										
22...	85	470	3100	0.20	6.7	6270	5400	8.53	<0.100	<0.010
JUN										
08...	108	420	2800	0.40	1.1	6080	5440	8.27	<0.100	0.060

See footnotes at end of table.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

GERBODE VALLEY CREEK BASIN

11460120 RODEO LAGOON AT FORT CRONKHITE, NEAR SAUSALITO, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	ARSENIC TOTAL (UG/L AS AS)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
MAR										
22...	<1	840	10	<1	30	20	<100	<0.10	<1	10
JUN										
08...	2	810	<10	7	20	20	<100	<0.10	<1	10

K Results based on colony count outside the acceptable range (non-ideal colony count).
< Actual value is known to be less than value shown.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

TENNESSEE VALLEY CREEK BASIN

11460[illegible]30 TENNESSEE VALLEY CREEK NEAR TAMALPAIS VALLEY, CA

LOCATION.--Lat 37°50'52", long 122°32'37", in Saucelito Grant, Marin County, Hydrologic Unit 18050005, at downstream side of footbridge, 10 ft downstream from right bank tributary, and 1.6 mi south of Tamalpais Valley.

DRAINAGE AREA.--1.91 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1986 to June 1988 (discontinued).
SEDIMENT DATA: Water years 1986 to March 1988 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	SELENIUM, TOTAL (UG/L AS SE)
JAN 1986		
30...	1040	<1
JUN		
25...	0945	<1

< Actual value is known to be less than the value shown.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	SELENIUM, TOTAL (UG/L AS SE)
MAR 1987		
05...	1525	<1
JUN		
12...	1345	<1

< Actual value is know to be less than the value shown.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
MAR										
22...	1440	0.20	224	7.80	14.0	770	9.2	88	77	140
JUN										
02...	1315	0.05	225	7.90	14.5	765	9.2	90	440	870

DATE	HARDNESS TOTAL (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3
MAR										
22...	54	0	9.3	7.5	21	45	1	1.4	64	52
JUN										
02...	56	0	9.9	7.7	23	46	1	1.4	73	60

DATE	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)
MAR										
22...	54	10	30	0.10	15	132	127	0.18	<0.100	0.020
JUN										
02...	59	6.6	30	0.30	16	131	130	0.18	<0.100	<0.010

See footnote at end of table.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

TENNESSEE VALLEY CREEK BASIN

11460130 TENNESSEE VALLEY CREEK NEAR TAMALPAIS VALLEY, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	ARSENIC TOTAL (UG/L AS AS)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
MAR										
22...	<1	40	<10	1	20	470	<100	<0.10	<1	10
JUN										
02...	1	50	<10	2	<10	52	<100	<0.10	<1	<10

< Actual value is known to be less than value shown.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
MAR					
22...	1450	0.20	14.0	8	0.00

ANALYSES OF SAMPLES COLLECTED AT WATER QUALITY PARTIAL-RECORD STATIONS

REDWOOD CREEK BASIN

11460140 REDWOOD CREEK BELOW MUIR WOODS NEAR MILL VALLEY, CA

LOCATION.--Lat 37°53'22", long 122°33'58", in Saucelito Grant, Marin County, Hydrologic Unit 18050005, on upstream side of Frank Valley Road bridge, 200 ft upstream from small left-bank tributary, and 1.7 mi southwest of Mill Valley Post Office.

DRAINAGE AREA.--4.11 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1986 to June 1988 (discontinued).
SEDIMENT DATA: Water years 1986 to January 1988 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	SELE-NIUM, TOTAL (UG/L AS SE)
JAN 1986		
31...	1330	<1
JUN		
26...	1015	<1

< Actual value is known to be less than the value shown.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	SELE-NIUM, TOTAL (UG/L AS SE)
FEB 1987		
13...	1500	<1
JUN		
10...	1500	<1

< Actual value is known to be less than value shown.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
JAN										
05...	0940	42	148	7.80	10.0	765	11.1	98	27	--
JUN										
07...	1400	0.70	225	7.90	13.5	765	9.2	88	34	97

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER WH IT FIELD MG/L AS HCO3	ALKA-LINITY WAT WH TOT IT FIELD MG/L AS CACO3
JAN										
05...	54	5	8.0	8.2	9.3	27	0.6	0.70	59	48
JUN										
07...	93	1	14	14	12	22	0.6	0.80	112	92

DATE	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
JAN										
05...	49	11	12	0.20	16	93	96	0.13	0.220	0.010
JUN										
07...	92	11	11	0.30	17	127	136	0.17	0.100	<0.010

See footnote at end of table.

ANALYSES OF SAMPLES COLLECTED AT WATER QUALITY PARTIAL-RECORD STATIONS

REDWOOD CREEK BASIN

11460140 REDWOOD CREEK BELOW MUIR WOODS NEAR MILL VALLEY, CA--Continued

DATE	ARSENIC TOTAL (UG/L AS AS)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
JAN										
05...	<1	20	<10	8	80	77	<100	<0.10	--	<10
JUN										
07...	1	30	<10	2	<10	<3	<100	<0.10	<1	<10

< Actual value is known to be less than value shown.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JAN						
05...	0955	42	10.0	8	0.91	87

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

REDWOOD CREEK BASIN

11460152 REDWOOD CREEK AT MUIR BEACH, NEAR TAMALPAIS VALLEY, CA

LOCATION.--Lat 37°51'47", long 122°34'27", in Saucelito Grant, Marin County, Hydrologic Unit 18050005, on downstream side bridge of beach access road, 1,000 ft upstream from Big Lagoon, and 1.7 mi southwest of Tamalpais Valley.

DRAINAGE AREA.--7.29 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1986 to June 1988 (discontinued).
SEDIMENT DATA: Water years 1986 to March 1988 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	SELENIUM, TOTAL (UG/L AS SE)
JAN 1986		
31...	1015	<1
JUN		
26...	1330	<1

< Actual value is known to be less than the value shown.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	SELENIUM, TOTAL (UG/L AS SE)
MAR 1987		
13...	1030	<1
JUN		
12...	0915	<1

< Actual value is known to be less than the value shown.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
JAN										
05...	1300	73	176	7.50	10.5	765	10.8	96	K50	--
JUN										
07...	1020	0.78	242	7.90	12.0	770	9.4	86	110	3600

DATE	HARDNESS TOTAL (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3
JAN										
05...	59	12	9.5	8.6	12	30	0.7	0.80	57	46
JUN										
07...	93	4	14	14	15	26	0.7	1.0	109	89

DATE	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)
JAN										
05...	47	13	18	0.20	15	107	108	0.15	0.580	0.020
JUN										
07...	89	13	16	0.30	15	131	143	0.18	0.390	<0.010

See footnotes at end of table.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

REDWOOD CREEK BASIN

11460152 REDWOOD CREEK AT MUIR BEACH, NEAR TAMALPAIS, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	ARSENIC TOTAL (UG/L AS AS)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
JAN										
05...	<1	20	<10	10	80	93	<100	0.10	<1	10
JUN										
07...	1	30	<10	2	<10	26	<100	<0.10	<1	<10

K Results based on colony count outside the acceptable range (non-ideal colony count).
< Actual value is known to be less than value shown.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JAN						
05...	1305	73	10.5	26	5.1	91

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

REDWOOD CREEK BASIN

11460154 GREEN GULCH AT MUIR BEACH, NEAR TAMALPAIS VALLEY, CA

LOCATION.--Lat 37°51'47", long 122°34'13", in Saucelito Grant, Marin County, Hydrologic Unit 18050005, on upstream side of bridge, 1.7 mi southwest of Tamalpais Valley.

DRAINAGE AREA.--1.15 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1986 to June 1988 (discontinued).
SEDIMENT DATA: Water years 1986 to January 1988 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	SELENIUM, TOTAL (UG/L AS SE)
JAN 1986		
30...	1345	<1
JUN		
25...	1400	<1

< Actual value is known to be less than the value shown.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	SELENIUM, TOTAL (UG/L AS SE)
MAR 1987		
13...	1400	<1
JUN		
12...	1105	<1

< Actual value is known to be less than the value shown.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
MAR										
23...	0935	0.04	434	7.60	12.5	775	7.5	69	K10	K26
JUN										
02...	0915	0.01	461	7.60	13.0	765	6.3	59	K3	260

DATE	HARDNESS TOTAL (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3
MAR										
23...	140	0	29	17	33	33	1	1.5	173	142
JUN										
02...	160	6	31	20	38	34	1	1.0	188	154

DATE	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)
MAR										
23...	143	24	41	0.10	10	244	245	0.33	0.820	<0.010
JUN										
02...	154	19	48	0.30	13	251	263	0.34	<0.100	<0.010

See footnotes at end of table.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

REDWOOD CREEK BASIN

11460154 GREEN GULCH AT MUIR BEACH, NEAR TAMALPAIS VALLEY, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	ARSENIC TOTAL (UG/L AS AS)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
MAR										
23...	<1	70	<10	<1	20	32	<100	<0.10	<1	10
JUN										
02...	<1	80	<10	2	<10	35	<100	<0.10	<1	<10

K Results based on colony count outside the acceptable range (non-ideal colony count).
< Actual value is known to be less than value shown.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
MAR					
23...	0950	0.04	12.5	4	0.00

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WEBB CREEK BASIN

11460156 WEBB CREEK NEAR STINSON BEACH, CA

LOCATION.--Lat 37°53'13", long 122°37'31", in Saucelito Grant, Marin County, Hydrologic Unit 18050005 at upstreamside of Highway 1 culvert, 900 ft upstream from mouth, and 0.8 mi southeast of Stinson Beach.

DRAINAGE AREA.--1.12 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1986 to June 1988 (discontinued).
SEDIMENT DATA: Water years 1986 to March 1988 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	SELE-NIUM, TOTAL (UG/L AS SE)
JAN 1986		
31...	1545	<1
JUN		
27...	0950	<1

< Actual value is known to be less than the value shown.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	SELE-NIUM, TOTAL (UG/L AS SE)
JUN 1987		
10...	1230	<1
FEB		
13...	1225	<1

< Actual value is known to be less than the value shown.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
MAR										
23...	1220	0.17	314	8.20	12.0	760	10.5	98	K11	1000
JUN										
01...	1410	0.08	343	8.20	12.5	760	9.8	92	K8	1200

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER WH IT FIELD MG/L AS HCO3	ALKA-LINITY WAT WH TOT IT FIELD MG/L AS CACO3
MAR										
23...	120	0	24	14	19	26	0.8	0.90	148	121
JUN										
01...	130	4	26	15	20	25	0.8	0.80	150	123

DATE	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
MAR										
23...	121	20	25	0.10	16	182	193	0.25	0.240	<0.010
JUN										
01...	123	20	25	0.30	16	186	198	0.25	0.180	0.020

See footnotes at end of table.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WEBB CREEK BASIN

11460156 WEBB CREEK NEAR STINSON BEACH, CA--Continued

DATE	ARSENIC TOTAL (UG/L AS AS)	BORON, DISSOLVED (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
MAR										
23...	2	20	<10	<1	20	7	<100	<0.10	<1	<10
JUN										
01...	2	20	<10	2	<10	4	<100	<0.10	<1	<10

K Results based on colony count outside the acceptable range (non-ideal colony count).
< Actual value is known to be less than value shown.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
MAR					
23...	1225	0.17	12.0	1	0.00

TABLE ROCK CREEK BASIN

11460158 TABLE ROCK CREEK AT STINSON BEACH, CA

LOCATION.--Lat 37°53'55", long 122°38'11", in Saucelito Grant, Marin County, Hydrologic Unit 18050005, at upstream side of Highway 1 bridge, adjacent to Stinson Beach Fire House.

DRAINAGE AREA.--1.34 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1986 to June 1988 (discontinued).
SEDIMENT DATA: Water years 1986 to March 1988 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	SELENIUM, TOTAL (UG/L AS SE)
JAN 1986		
30...	1600	<1
JUN		
27...	1300	<1

< Actual value is known to be less than the value shown.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	SELENIUM, TOTAL (UG/L AS SE)
FEB 1987		
13...	0930	<1
JUN		
10...	0940	<1

< Actual value is known to be less than the value shown.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)
MAR											
23...	1430	0.11	320	8.50	14.5	770	10.5	102	K75	270	110
JUN											
01...	0950	0.08	330	8.40	13.0	765	9.8	93	670	1700	120

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	CARBONATE WATER WH IT FIELD MG/L AS CO3	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3
MAR										
23...	0	20	15	22	30	0.9	1.5	99	22	117
JUN										
01...	8	21	16	23	30	0.9	1.0	128	3	110

DATE	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)
MAR										
23...	117	20	26	0.10	19	192	195	0.26	0.250	0.020
JUN										
01...	110	21	26	0.30	20	188	196	0.26	0.300	<0.010

See footnotes at end of table.

ANALYSIS OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

TABLE ROCK CREEK BASIN

11460158 TABLE ROCK CREEK AT STINSON BEACH, CA--Continued

DATE	ARSENIC TOTAL (UG/L AS AS)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
MAR										
23...	8	20	<10	<1	20	24	<100	<0.10	<1	<10
JUN										
01...	8	20	<10	4	<10	14	<100	<0.10	<1	<10

K Results based on colony count outside the acceptable range (non-ideal colony count).
< Actual value is known to be less than value shown.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
MAR					
23...	1435	0.11	14.5	4	0.00

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL RECORD STATIONS

SANTA ROSA CREEK BASIN

353339121053900 SANTA ROSA CREEK ON HIGHWAY 1 BRIDGE AT CAMBRIA, CA

LOCATION.--Lat 35°33'39", long 121°05'39", in San Luis Obispo County, Hydrologic Unit 18060006, at Highway 1 bridge, 1.3 mi upstream from mouth, and 0.8 mi west of Cambria.

DRAINAGE AREA.--46.6 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: March to September 1988.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
MAR								
09...	0845	5.0	848	8.20	13.0	71	57	30
APR								
21...	1445	3.9	878	--	19.0	--	--	--
MAY								
10...	1535	1.7	928	--	22.0	--	--	--

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)
MAR								
09...	1.7	347	110	25	0.30	18	160	11
APR								
21...	--	--	--	--	--	--	--	--
MAY								
10...	--	--	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

SANTA ROSA CREEK BASIN

353406121061100 SANTA ROSA CREEK AT WINDSOR BOULEVARD, NEAR CAMBRIA, CA

LOCATION.--Lat 35°34'06", long 121°06'11", in San Luis Obispo County, Hydrologic Unit 18060006, at bridge at intersection of Windsor Boulevard and County Road, 0.5 mi upstream from mouth, and 1.3 mi west of Cambria.

DRAINAGE AREA.--47.1 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: March to September 1988.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
MAR 08...	1550	5.0	865	8.20	16.5	69	56	33
MAY 10...	1400	1.7	932	--	19.0	--	--	--
JUN 22...	1315	0.11	1210	--	16.5	--	--	--

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	BORON, DISSOLVED (UG/L AS B)	IRON, DISSOLVED (UG/L AS FE)
MAR 08...	1.8	343	110	7.5	0.30	18	160	9
MAY 10...	--	--	--	--	--	--	--	--
JUN 22...	--	--	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

SAN SIMEON CREEK BASIN

353635121043101 SAN SIMEON CREEK AT PALMER FLATS, NEAR CAMBRIA, CA

LOCATION.--Lat 35°36'35", long 121°04'31", in NE 1/4 SW 1/4 sec.11, T.27 S., R.8 E., San Luis Obispo County, Hydrologic Unit 18060006, at bridge on San Simeon Creek Road, 3.1 mi north of Cambria.

DRAINAGE AREA.--23.1 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: March to September 1988.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
MAR								
08...	1215	5.1	493	8.20	15.5	42	30	16
APR								
20...	1750	19	431	--	15.0	--	--	--
MAY								
10...	1225	0.98	556	--	19.0	--	--	--

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)
MAR								
08...	1.1	216	41	13	0.20	15	200	9
APR								
20...	--	--	--	--	--	--	--	--
MAY								
10...	--	--	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

LAKE MERCED BASIN

374330122295601 LAKE MERCED AT BOATHOUSE, AT SAN FRANCISCO, CA

LOCATION.--Lat 37°43'30", long 122°29'56", South Lake Merced, San Francisco County, Hydrologic Unit 18050006 next to the boathouse, in San Francisco.

PERIOD OF RECORD.--
CHEMICAL DATA: October 1987 to September 1988.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	PH (STANDARD UNITS)	HARDNESS TOTAL (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)
NOV												
17...	0900	654	15.5	8.30	210	8	31	32	59	38	2	2.1
MAR												
01...	0800	643	14.0	8.20	210	19	31	33	59	37	2	2.1
MAY												
02...	1250	650	18.0	8.60	210	15	30	33	60	38	2	2.4

DATE	BICARBONATE WATER WH IT FIELD MG/L AS HCO3	CARBONATE WATER WH IT FIELD MG/L AS CO3	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	BROMIDE DISSOLVED (MG/L AS BR)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	H-2 / H-1 STABLE ISOTOPE RATIO PER MIL	O-18 / O-16 STABLE ISOTOPE RATIO PER MIL
NOV												
17...	244	0	200	23	75	0.4	0.22	38	381	<0.10	-6.0	0.8
MAR												
01...	234	0	192	28	79	0.3	0.19	34	383	<0.10	-11	-0.9
MAY												
02...	230	8	202	35	78	0.3	0.21	35	391	<0.10	-6.0	0.3

< Actual value is known to be less than the value shown.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

EEL RIVER BASIN

394756123165701 TOWN CREEK NEAR COVELO, CA

LOCATION.--Lat 39°47'56", long 123°16'57", in NW 1/4 NW 1/4 sec.2, T.23 N, R.13 W, Mendocino County, Hydrologic Unit 18010104, 1.9 mi west of Covelo and 500 ft upstream of unnamed livestock pond.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--
CHEMICAL DATA: October 1987 to September 1988 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH LAB (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
JUL									
11...	1700	<0.50	344	8.50	25.5	K6	K1600	150	14

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
JUL									
11...	40	13	12	14	0.4	1.5	140	29	10

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)
JUL								
11...	0.10	11	208	201	0.28	<0.100	110	<3

< Actual value is known to be less than the value shown.
K Results based on colony count outside the acceptable range (non-ideal colony count).

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

EEL RIVER BASIN

394922123114901 SHORT CREEK NEAR COVELO, CA

LOCATION.--Lat 39°49'22", long 123°11'49", in NW 1/4 SE 1/4 sec.28, T.23 N, R.12 W, Mendocino County, Hydrologic Unit 18010104, 3.3 mi northeast of Covelo and 0.4 mi east of Nome Lackee Cemetary.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--
CHEMICAL DATA: October 1987 to September 1988 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH LAB (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
JUL									
11...	1345	<1.0	197	8.40	26.5	530	K1700	85	3

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
JUL									
11...	20	8.5	6.5	14	0.3	0.80	82	15	3.8

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)
JUL								
11...	0.20	8.7	113	117	0.15	1.00	40	<3

< Actual value is known to be less than the value shown.
K Results based on colony count outside the acceptable range (non-ideal colony count).

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

EEL RIVER BASIN

395017123163501 MILL CREEK ABOVE MEDICINE HILL, NEAR COVELO, CA

LOCATION.--Lat 39°50'17", long 123°16'35", in NE 1/4 SW 1/4 sec.23, T.23 N, R.13 W, Mendocino County, Hydrologic Unit 18010104, Round Valley Indian Reservation, 3.5 mi northwest of Covelo and 1.0 mi north of Medicine Hill.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--
CHEMICAL DATA: October 1987 to September 1988 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM)	PH LAB (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
JUL									
11...	1535	<0.50	334	8.40	28.0	K30	K1600	150	14

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
JUL									
11...	41	12	12	15	0.4	1.3	138	24	10

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)
JUL								
11...	0.20	9.5	195	193	0.27	<0.100	110	<3

< Actual value is known to be less than the value shown.
K Results based on colony count outside the acceptable range (non-ideal colony count).

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FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI).

Multiply inch-pound units	By	To obtain SI units
	Length	
inches (in)	2.54×10^{1}	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^{0}	kilometers (km)
	Area	
acres	4.047×10^{3}	square meters (m^2)
	4.047×10^{-1}	square hectometers (hm^2)
	4.047×10^{-3}	square kilometers (km^2)
square miles (mi^2)	2.590×10^{0}	square kilometers (km^2)
	Volume	
gallons (gal)	3.785×10^{0}	liters (L)
	3.785×10^{0}	cubic decimeters (dm^3)
	3.785×10^{-3}	cubic meters (m^3)
million gallons	3.785×10^{3}	cubic meters (m^3)
	3.785×10^{-3}	cubic hectometers (hm^3)
cubic feet (ft^3)	2.832×10^{1}	cubic decimeters (dm^3)
	2.832×10^{-2}	cubic meters (m^3)
cfs-days	2.447×10^{3}	cubic meters (m^3)
	2.447×10^{-3}	cubic hectometers (hm^3)
acre-feet (acre-ft)	1.233×10^{3}	cubic meters (m^3)
	1.233×10^{-3}	cubic hectometers (hm^3)
	1.233×10^{-6}	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	2.832×10^{1}	liters per second (L/s)
	2.832×10^{1}	cubic decimeters per second (dm^3/s)
	2.832×10^{-2}	cubic meters per second (m^3/s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm^3/s)
	6.309×10^{-5}	cubic meters per second (m^3/s)
million gallons per day	4.381×10^{1}	cubic decimeters per second (dm^3/s)
	4.381×10^{-2}	cubic meters per second (m^3/s)
	Mass	
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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